

# BUFFALO FORGE COMPANY

FORGES · BLOWERS  
METAL WORKING  
MACHINES · WOOD-  
WORKERS · DRILLS



Catalog No. 801



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# General Catalog of

# "Buffalo"

FORGES, HAND BLOWERS, TUYERE IRONS,  
ELECTRIC FORGE BLOWERS AND FORGES, POST  
DRILLS, HAND AND POWER DRILLING MACH-  
INES, POWER BLOWERS AND EXHAUST FANS,  
HAND AND POWER PUNCHES AND SHEARS,  
BAR CUTTERS, BENDING MACHINES, UNIVERS-  
AL WOOD-WORKERS, STATIONARY FORGE  
SHOP EQUIPMENT, DISC VENTILATING FANS,  
HEATING, VENTILATING, DRYING AND  
MECHANICAL DRAFT APPARATUS

## Buffalo Forge Company

BUFFALO, NEW YORK, U. S. A.

In Canada—Canadian Blower & Forge Co., Ltd., Kitchener, Ont.

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# Foreword

In this catalog you will find a complete showing and listing of the tools which, in more than fifty years in the hands of users, have demonstrated their value.

Just as the Buffalo Forge Company was the first manufacturer to produce a portable forge with hand blower attached, so have we pioneered many other features, among which may be mentioned the all-steel, one-piece hearths on many of our forges, the improved type agricultural forge, the moderately-priced, accurate 12-inch Hi-speed Drill, the volume fan and the all-steel Breezo ventilating fan.

## Instructions for Ordering

Wishing to save time for our customers, and to avoid unnecessary correspondence and possible misunderstandings, we print the following:

### ORDERS:

Please be careful when ordering to observe the following points, which are covered in detail in the appropriate sections of the catalog. Insufficient information holds up many shipments which might be made from stock.

Forges are shown and listed with and without hoods, etc., under different numbers. Select the number corresponding to the arrangement wanted.

State definitely if forge is wanted with or without water tank.

Give complete information about the current for all electric forges, blowers and drills. Wall drills are furnished with chucks to take a  $\frac{1}{2}$  in. straight shank unless otherwise specified.

For power blowers and exhausters clock-wise bottom horizontal discharge is standard. Note instructions for determining other arrangements.

### TERMS AND DELIVERY:

Our terms are net thirty days or 1 per cent. for cash in 10 days. Those not known to us, and who have not established credit rating with the mercantile agencies, should send cash with order, or give references.

All prices are f. o. b. Buffalo, N. Y.; boxing for export is charged extra at cost. We do not send goods C. O. D. except when so directed, and with a remittance sufficient to cover carriage and C. O. D. charges both ways. On goods sent by mail, parcel post, or prepaid express, such charges are added to our invoice at cost.

BUFFALO FORGE COMPANY

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# Buffalo Portable Forges

## Important Information

**T**HE modern, advanced line of "Buffalo" Forges illustrated in this catalog is the result of over fifty successful years of designing and manufacturing "America's Best, The World's Standard."

Buffalo forges were the first to feature many improvements which have since become common, such as the ball bearing blower, down-draft hood, one-piece steel hearth, etc., all of which have been of benefit to the user.

In this new catalog another exclusive Buffalo feature is presented for the first time.

This is the new large, pressed-steel, scroll-shaped fan-case now being used on all "Buffalo" forges. The fan-case, of heavy pressed steel construction, rigidly bolted together, provides freedom from breakage, a greater blast and is of light weight. It is the same fan housing as used for several years on the Buffalo No. 2-E Electric Blower.

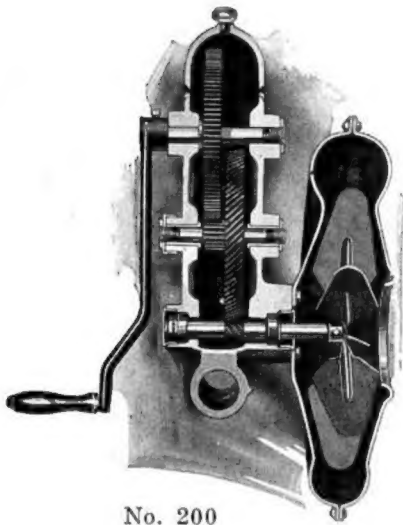
The advantage of correct proportioning of a fan scroll in large fans has long been known but has never before been applied to hand blowers. The stream line effect explains the large capacity and high efficiency of the fan. A specially designed pressed steel wheel, 9 inches in diameter furnishes the blast for all blowers. The use of this standard fan case means low cost production, reduced stock for the dealer and a better product for the user.

In addition to this important improvement we have further simplified the line by the omission of the less popular numbers.

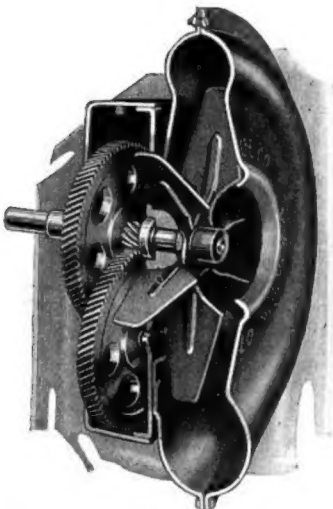
The Nos. 200, 500 and 700 hand blowers are now available on seven different hearths, making a total of 21 forges from which to make your choice, as well as electric, compressed air and oil-burning forges.

We believe this catalog shows the finest forges ever made, and feel confident that users will share our enthusiasm.

## Description of Blowers Available



No. 200



No. 500



No. 2-E Electric

### The No. 200 Silent Geared Blower

For many years a popular and efficient outfit, this blower has been further improved by the use of the new fan case. One-piece cast-iron gear-case with removable cover keeps gears in permanent alignment and makes inspection easy. The helical pinion is cut from the steel fan shaft, and not only guarantees quiet operation, but also adds strength to the entire gear assembly. "New Departure" ball bearings are used, the best obtainable for light service at high speeds. Gear ratio is  $47\frac{1}{2}$  to 1.

An eccentric main bearing permits wear to be taken up by easy adjustment on the shaft end. End thrust on shaft is taken up by adjustable ball bearing.

#### GUARANTEED FOR TEN YEARS

We guarantee to replace free of charge F.O.B. Buffalo, any part of the No. 200 Blower wearing out within ten years. Run the blower 24 hours per day and the guarantee still holds. The No. 200 blower is available on all forges, as shown in pages following.

### The No. 500 Handy Geared Blower

There is little difference in the general construction of the No. 200 and 500 blowers except that the gears in the No. 500 are enclosed in an all-steel housing instead of cast-iron. Our highly developed press equipment enables us to produce stampings with the accuracy of machined castings. Radial ball bearings provide easy operation and adjustment for wear. Cut steel gears are quiet in operation. Ratio  $47\frac{1}{2}$  to 1.

The steel fan case is riveted to gear case on the No. 500 blower making a rigid unbreakable unit.

### The No. 700 Climax Geared Blower

For those who do not use a forge blower every day, the Buffalo No. 700 offers the greatest value on the market in a high-power, light, unbreakable and inexpensive blower head. Construction is just like the No. 500, except that bronze bushings are used instead of ball bearings. Construction and material first class throughout. Gear ratio  $47\frac{1}{2}$  to 1.

### The Buffalo Electric Blower No. 2-E

The series number 800 is applied to all Buffalo electric forges equipped with Nos. 2-E or 2-EH electric blowers. All six hearths listed in this catalog can be supplied with this electric blower.

Complete description of blower only given on page 15.

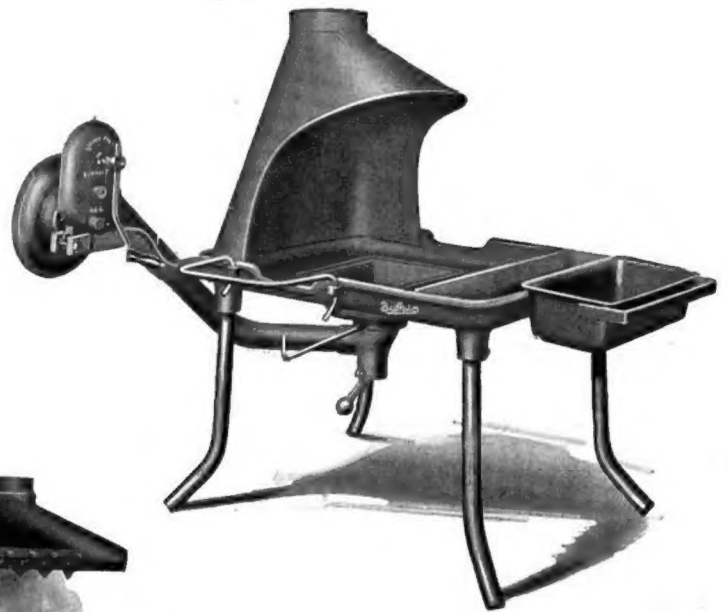
*Buffalo*

## Designation of Hoods



All Buffalo forges may be had with either of two types of hoods. The majority of forges are shipped with the type shown on the two forges at the top of this page, called "windshields". This is the hood which we regularly furnish when the order does not specify.

Those who want the hood shown on the two forges at center right and bottom left, called "half-hood", can obtain same by adding the letter H to the number of the forge. Thus: No. 210-H, forge with half-hood.



When desired, the down-draft hood shown at left can be furnished. This hood is particularly effective in removing smoke and fumes.

*Buffalo*

## Buffalo Series 10 Rivet Forges

### ONE-PIECE SEAMLESS STEEL HEARTHS



Buffalo No. 210 Rivet Forge

The one-piece unbreakable, all steel hearth used on all No. 10 Forges was originated and perfected by Buffalo for the benefit of the user. Pressed out of heavy steel plate by enormous presses, the No. 10 hearth is far stronger than the old style two or three piece hearths, lighter in weight, and about 100% better looking.

Forges of this type are generally used out-of-doors or under temporary shelters, and it formerly took only a short time for moisture to accumulate along the seams, after which rust speedily destroyed the hearth. With the one-piece Buffalo hearth this is impossible because there are no seams in the entire bowl. This feature alone doubles the life of the hearth.

The No. 10 forges are supported by four heavy pipe legs widely spread at the bottom and securely fastened at top and center.

Blowers are mounted so that they can be taken off in a minute or two, in fact, the whole forge can be readily knocked down for transportation.

Four different types of blowers are available with the No. 10 hearth, as listed below.

| Forge No. | Blower No. | Gear Ratio | Diam. of Fan Case | Hearth   | Net Wgt. | Crated Wgt. |
|-----------|------------|------------|-------------------|----------|----------|-------------|
| 210       | 200        | 47½x1      | 12 in.            | 18" Dia. | 96       | 105         |
| 510       | 500        | 47½x1      | 12 in.            | 18" "    | 85       | 95          |
| 710       | 700        | 47½x1      | 12 in.            | 18" "    | 85       | 95          |
| 810       | Electric   | .....      | 12 in.            | 18" "    | 105      | 130         |

For half-hood on any of these forges add the letter H after the forge number and add 6 pounds to the weights.  
Clay hearths before using.

*Buffalo*



## Buffalo Series 12 Rivet Forges

### ONE-PIECE SEAMLESS STEEL HEARTHS



Buffalo No. 812 Rivet Forge

A further indication of the extent to which we have gone to provide "the best" in forges for our customers is found in the number 12 series shown on this page. This forge has a deep-drawn heavy, one-piece steel hearth 24 inches in diameter. While our smaller one-piece hearths have been imitated, we are at present the only manufacturer to offer a 24" one-piece hearth. The cost of making dies to press out this heavy bowl was quite large, but when we saw the enormous difference in the old style and the new, we decided to make up the 24-inch hearth regardless of the expense.

Our faith in the excellence of this forge has been justified because it is today one of the most popular models.

On a forge with as large a hearth as 24 inches, it is important that the legs be of ample strength and properly spaced to prevent over-balancing. On the No. 12 series this is so well worked out that the forge is more solid than a three-legged forge, and much harder to over-balance. In fact, the whole forge is so well proportioned that it is a pleasure to use it.

Although rigid when assembled, the No. 12 series of forges is easily and quickly dismantled for transportation.

Four different blowers are available as indicated below.

| Forge No. | Blower No. | Gear Ratio | Diam. of Fan Case | Hearth   | Net Wgt. | Crated Wgt. |
|-----------|------------|------------|-------------------|----------|----------|-------------|
| 212       | 200        | 47½ to 1   | 12 in.            | 24" Dia. | 115      | 125         |
| 512       | 500        | 47½ to 1   | 12 in.            | 24" "    | 100      | 120         |
| 712       | 700        | 47½ to 1   | 12 in.            | 24" "    | 100      | 120         |
| 812       | Electric   | .....      | 12 in.            | 24" "    | 100      | 110         |

For half-hood on any of these forges add the letter H after the forge number and 8 pounds to the weights. Clay hearths before using.

*Buffalo*

## Buffalo Series 35 Forges

ONE-PIECE, SEAMLESS, ALL-STEEL HEARTHS



The Buffalo  
No. 235 Forge.

The Series 35 forges with shallow, all steel hearths, were designed for light work of large size, and for this kind of service are particularly satisfactory.

The hearth is 24 inches wide, 30 inches long and 3 inches deep. Made from heavy gauge steel plate, there are no seams nor sharp corners to collect moisture and rust thru, and no joints to come apart. The top of the hearth is turned back to

form a broad flange, strengthening the whole forge and forming a convenient tool rest.

Legs are of heavy steel pipe, securely held in place with steel bracing so that there is no possibility of loosening. One of the advantages of construction of the No. 35 forges is found in the ease with which they can be "knocked down" and reassembled when necessary.

Four blowers can be had with the series 35 hearth as shown below.

| Forge No.  | Blower No. | Gear Ratio | Diam. of Fan Case | Hearth  | Net Wgt. | Crated Wgt. |
|------------|------------|------------|-------------------|---------|----------|-------------|
| <b>235</b> | 200        | 47½ to 1   | 12 in.            | 24x30x3 | 107      | 171         |
| <b>535</b> | 500        | 47½ to 1   | 12 in.            | 24x30x3 | 97       | 130         |
| <b>735</b> | 700        | 47½ to 1   | 12 in.            | 24x30x3 | 97       | 130         |
| <b>835</b> | Electric   | .....      | 12 in.            | 24x30x3 | 102      | 137         |

For half-hood on any of these forges add the letter H after the forge number and add 10 lbs. to the weights. Water tanks furnished only when specified, and at extra charge. Clay hearths before using.

*Buffalo*

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## Buffalo Series 36 Forges

DEEP, HEAVY, SEAMLESS, ONE-PIECE STEEL HEARTHS



Buffalo No. 236-H Forge

There is always a need for a deep hearth forge for certain kinds of work and the No. 36 all-steel forge was designed with that in mind. A full 6 inches deep, 24 inches wide, and 30 inches long, made from a single heavy sheet of steel, no other forge can offer so much in light weight, strength, portability, and large capacity.

Legs are heavy angle iron, bolted securely to the deep hearth, and effectively strengthened with steel cross braces. Blowers are mounted on a substantial bracket.

The Buffalo "Vulcan" Tuyere is supplied on the No. 36 series of forges. This is described fully on page 16.

| Forge No. | Blower No. | Gear Ratio | Diam. of Fan Case | Hearth  | Net Wgt. | Crated Wgt. |
|-----------|------------|------------|-------------------|---------|----------|-------------|
| 236       | 200        | 47½ to 1   | 12 in.            | 24x30x6 | 117      | 181         |
| 536       | 500        | 47½ to 1   | 12 in.            | 24x30x6 | 107      | 140         |
| 736       | 700        | 47½ to 1   | 12 in.            | 24x30x6 | 107      | 140         |
| 836       | Electric   | .....      | 12 in.            | 24x30x6 | 112      | 147         |

For Half-Hood on any of these forges add the letter H after the forge number and 10 pounds to the weights.

Water tanks furnished only when specified and at extra charge.

Clay hearths before using.

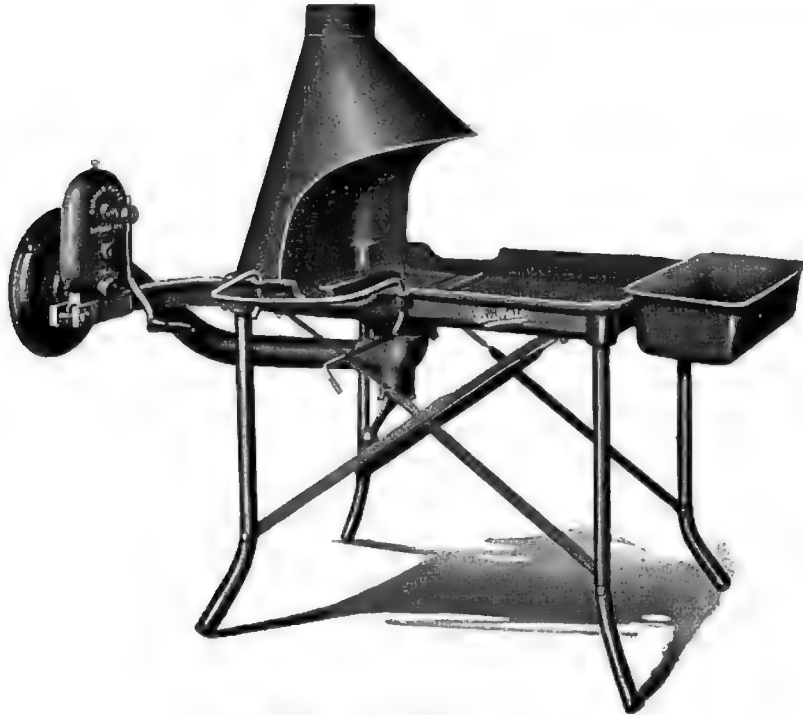
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*Buffalo*



## Buffalo Series 43 Forges

WITH CAST IRON HEARTH



Buffalo No. 243-H Forge

In the revised line of forges shown in this catalog only three cast iron hearths are retained, principally for use where light weight is unimportant. Of these the No. 43 shown here is the most popular.

Garages, general repair shops, street railways and similar shops use many No. 43 hearths with the No. 200 blower as shown here, the finest outfit obtainable for their work.

Heavy steel pipe legs are used on the No. 243, securely strengthened with steel cross braces. Buffalo Vulcan Tuyere is supplied.

### Down-Draft Hood

When desired, the down-draft hood shown at right can be furnished. This hood is so arranged that the rising gases are drawn back into the blower and thus improve combustion.



Buffalo No. 243-E Down-Draft Forge

| Forge No. | Blower No. | Gear Ratio | Diam. of Fan Case | Hearth | Net Wgt. | Crated Wgt. |
|-----------|------------|------------|-------------------|--------|----------|-------------|
| 243       | 200        | 47½ to 1   | 12 in.            | 28x40  | 260      | 300         |
| 543       | 500        | 47½ to 1   | 12 in.            | 28x40  | 250      | 290         |
| 743       | 700        | 47½ to 1   | 12 in.            | 28x40  | 250      | 290         |
| 843       | Electric   | .....      | 12 in.            | 28x40  | 260      | 300         |

For half-hood on any of these forges add the letter H after the forge number and 5 pounds to the weights.

For down-draft hood on No. 243 and 843 add letter E and 250 pounds to the weights.

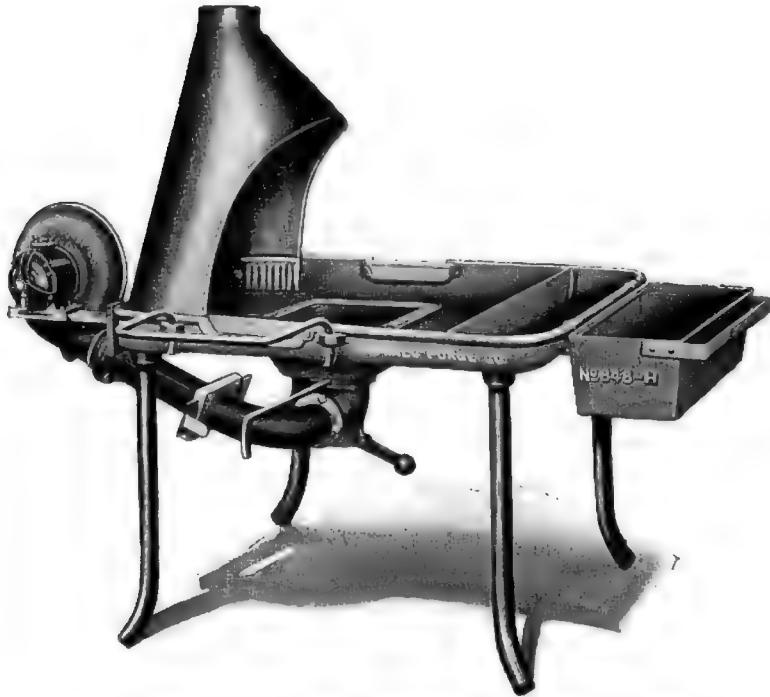
Water tanks furnished only when specified and at extra charge.

Clay hearths before using.

*Buffalo*

## Buffalo Series 48 and 49 Forges

WITH CAST IRON HEARTH



Buffalo No. 848-H Forge with Electric Blower

The No. 48 and 49 cast iron hearths are used for the heaviest kind of blacksmith work, in railroad shops, truck and bus garages.

Very heavy, cast iron construction with extra large steel pipe legs, anchored at the top in pockets cast on the hearth.

The No. 48 hearth is 38x42 inches by 3 inches deep, and weighing 415 lbs. is semi-portable. Removable iron partition is arranged to serve as coal box.

No. 49 is the same length and width, but is 6 inches deep, to fill the need for a larger fire for very heavy work. The hearth may be lined with fire brick if desired.

Both of these forges can be equipped with the down-draft hood shown on page 10.

| Forge No. | Blower No. | Gear Ratio | Diam. of Fan Case | Hearth  | Net Wgt. | Crated Wgt. |
|-----------|------------|------------|-------------------|---------|----------|-------------|
| 248       | 200        | 47½ to 1   | 12 in.            | 38x42x3 | 345      | 415         |
| 548       | 500        | 47½ to 1   | 12 in.            | 38x42x3 | 335      | 405         |
| 748       | 700        | 47½ to 1   | 12 in.            | 38x42x3 | 335      | 405         |
| 848       | Electric   | .....      | 12 in.            | 38x42x3 | 345      | 415         |
| 249       | 200        | 47½ to 1   | 12 in.            | 38x42x7 | 540      | 610         |
| 549       | 500        | 47½ to 1   | 12 in.            | 38x42x7 | 520      | 590         |
| 749       | 700        | 47½ to 1   | 12 in.            | 38x42x7 | 520      | 590         |
| 849       | Electric   | .....      | 12 in.            | 38x42x7 | 540      | 610         |

For half-hood on any of these forges add the letter H after the forge number and 10 pounds to the weights.  
 For down-draft hood on Nos. 248 and 848 add letter E and 325 pounds to the weights.  
 Water tanks furnished only when specified and at extra charge.  
 Clay hearths before using.

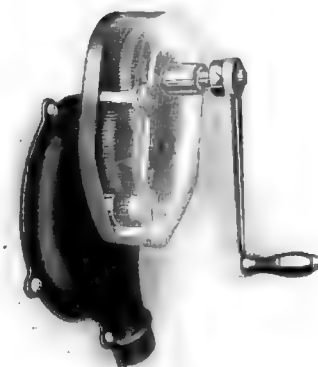
*Buffalo*

## The Famous "Bufco" Forges

"Buffalo Forge Company's distinctive accomplishment in the way of light forges."

An accurately stamped steel gear and fan case furnish air for our standard drawn steel hearths. Bronze bushings are used thruout, the fan has a 5½ inch pressed steel wheel.

The Bufco forges are particularly suited to agricultural implement work, occasional repair work and rivet heating demanding easy portability.



### Bufco Nos. 061 and 062 Forges



Bufco No. 061

These forges are now made with a heavy one-piece drawn steel hearth, perfectly formed, without seams or corners to collect moisture and rust. The hearth is stronger and more durable than cast iron, and is considerably lighter.

The forge is mounted on three strong jointed legs and will stand firmly on uneven ground. The Bufco blower described above is regularly furnished. Shipping costs are low because these forges are knocked down and shipped in cartons.



Bufco 062-H

| No.   | Size of Hearth          | Hood       | Wgt. Packed in Carton |
|-------|-------------------------|------------|-----------------------|
| 061   | 18 in. dia., 3 in. deep | Windshield | 48 lbs.               |
| 061-H | 18 in. dia., 3 in. deep | Half-hood  | 52 lbs.               |
| 062   | 24 in. dia., 3 in. deep | Windshield | 56 lbs.               |
| 062-H | 24 in. dia., 3 in. deep | Half-hood  | 58 lbs.               |

### Bufco Bench Forge

A sturdy little outfit made up for use on a bench, or where a forge is frequently transported from place to place. The one-piece steel plate hearth is mounted on a short pedestal. No. 7 has steel windshield, No. 8 has half-hood.

| No. | Hearth      | Shipping Wgt. with Case | Without Case |
|-----|-------------|-------------------------|--------------|
| 7   | 18 in. dia. | 70 lbs.                 | 40 lbs.      |
| 8   | 18 in. dia. | 72 lbs.                 | 42 lbs.      |

Clay hearths before using.



*Buffalo*



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## Buffalo Compressed Air Forges



Buffalo No. 010

The forge shown here is an entirely re-designed model; stronger, lighter, better-looking than the old style.

Hearths are the Nos. 10 and 12 described on pages 6 and 7, mounted on well-braced steel pipe legs. One-piece seamless construction of the hearth guarantees long life.

This forge is operated by compressed air at any pressure available from 15 to 100 lbs. A simple needle valve provides for easy regulation of blast, and once adjusted, this valve requires no further attention. The compressed air is fed to the fire thru a specially made three stage injector. In stages one and two, five volumes of outside air are drawn in to each volume of compressed air. In the third stage the air is mixed and reduced to proper pressure for the fire.

Made in two sizes only.

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|                                     |                  |                  |                     |
|-------------------------------------|------------------|------------------|---------------------|
| <b>No. 010</b> Compressed Air Forge | 18" dia. Hearth. | Net Wgt. 34 lbs. | Crated Wgt. 50 lbs. |
| <b>No. 012</b> Compressed Air Forge | 24" dia. Hearth. | Net Wgt. 39 lbs. | Crated Wgt. 60 lbs. |

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Clay hearths before using.

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*Buffalo*

## Buffalo Oil-Burning Forges



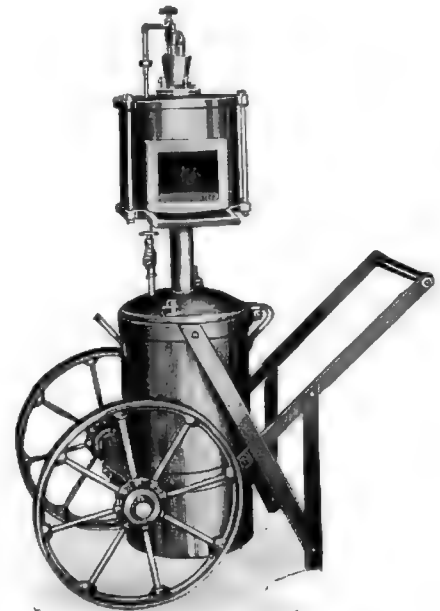
Buffalo No. 3 Oil-Burning Rivet Forge.

Probably the most easily controlled and safest method of heating rivets where compressed air is available. With these forges there are no sparks, rivets are always in plain view and held at the proper temperature. Impossible to burn rivets with these forges.

The tank is of welded steel, with steel fire chambers lined with 2 inches of refractory material of the best quality. To replace worn-out linings it is only necessary to unscrew three nuts and lift the top off the fire chamber.

Air is supplied to the tank thru a single connection which furnishes pressure for the oil supply as well as air for the atomizer. Burns kerosene, distillate or any fuel oil.

Nos. 1 and 2 forges are open at the front only, while No. 3 has an opening all the way thru so that long stock can be heated. A block of fire brick is provided to close the back of forge when heating rivets.



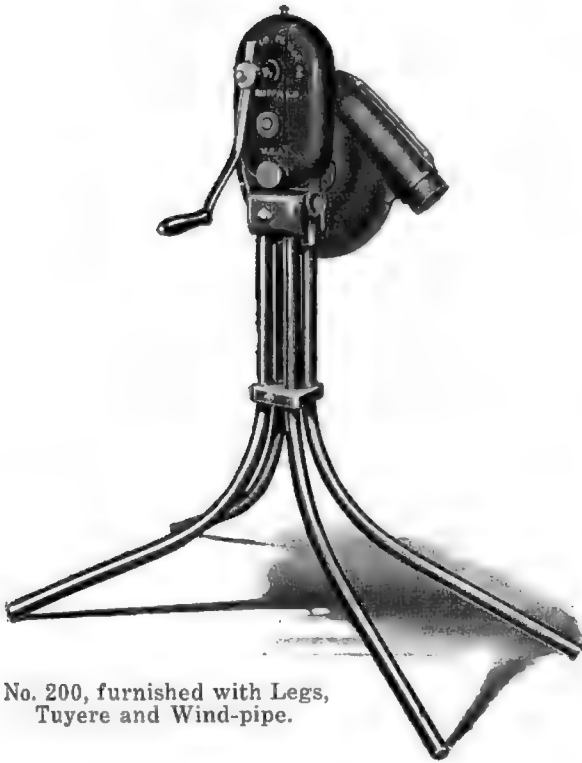
No. 1 Forge mounted on truck making an ideal portable unit for factories and construction jobs.

### SPECIFICATIONS

|                          | No. 1       | No. 2     | No. 3     |
|--------------------------|-------------|-----------|-----------|
| Height to top of chamber | 43 in.      | 45 in.    | 45 in.    |
| Height of chamber        | 11½ in.     | 14½ in.   | 14½ in.   |
| Inside diameter          | 7 in.       | 10 in.    | 10 in.    |
| Inside height            | 6 in.       | 8 in.     | 8 in.     |
| Fire opening             | 3½ x 5¼ in. | 4 x 6 in. | 4 x 6 in. |
| Capacity of tank         | 12 gal.     | 18 gal.   | 18 gal.   |
| Shipping Wgt.            | 175 lbs.    | 260 lbs.  | 260 lbs.  |
| Shipping Wgt. with Truck | 235 lbs.    | 320 lbs.  | 320 lbs.  |

*Buffalo*

## Buffalo Hand and Electric Blowers



No. 200, furnished with Legs, Tuyere and Wind-pipe.

### No. 200 Hand Blower on Legs—

The popular No. 200 blower head described on page 4, mounted on four strong steel pipe legs. Supplied with "Vulcan" tuyere and two 19-inch lengths of 3 inch pipe and elbow the same as shown with the No. 500 below.

### Nos. 500 and 700 Blowers on Pedestals—

The 500 and 700 Blowers are described fully on page 4. Supplied as shown here with "Vulcan" tuyere, and pipe with elbow, or can be furnished with legs same as No. 200.



### Electric Blowers—

These small forge fire blowers are also used on small furnaces, church organs, etc. Motor is variable speed, ball-bearing. Several feet of wire, plug and six-speed regulator are supplied. Operates on 25, 30, 40, 50 or 60 cycle and for 110 or 220 volts only.



No. 2-E Electric Blower with variable speed motor and six speed regulator

### Buffalo Hand Power Blowers

| No.   | Type of support | Net Wgt. | Crated Wgt. |
|-------|-----------------|----------|-------------|
| 200-L | Legs            | 123 lbs. | 133 lbs.    |
| 500-L | Legs            | 110 lbs. | 125 lbs.    |
| 500-P | Pedestal        | 100 lbs. | 115 lbs.    |
| 700-L | Legs            | 62 lbs.  | 70 lbs.     |
| 700-P | Pedestal        | 100 lbs. | 115 lbs.    |

### Buffalo Electric Blowers (Variable Speed)

| No.  | Wgt.    | R.P.M. | Dia. of Outlet | Total Hgt. |
|------|---------|--------|----------------|------------|
| 2-E  | 38 lbs. | 2600   | 3 in.          | 15 in.     |
| 2-EH | 40 lbs. | 3400   | 3 in.          | 15 in.     |

### Buffalo Electric Blowers (Constant Speed)

| No.  | Wgt.     | R.P.M. | Dia. of Outlet | Total Hgt. |
|------|----------|--------|----------------|------------|
| 2-E  | 50 lbs.  | 1750   | 3 in.          | 15 in.     |
| 2-EH | 55 lbs.  | 3000   | 3 in.          | 15 in.     |
| 3-E  | 90 lbs.  | 3400   | 4 in.          | 17 in.     |
| 4-E  | 110 lbs. | 3400   | 5 in.          | 20 in.     |

When ordering specify whether 110 Volt or 220 Volt regulator is wanted.

*Buffalo*



## Buffalo Tuyeres



Vulcan

The Buffalo Vulcan Tuyere was designed for general all around blacksmith work. Eccentric blast valve gives a wide range of regulation as follows:

With the small opening of the tuyere the blast is forced into the fire pot through three tapering converging channels, giving a large deep fire.

A quarter turn of the rod brings the valve to a position suitable for a small fire at either side of the fire-pot.

It is very easy because of the rising and falling action of the valve to break up clinkers and clear the fire-pot making cleaning out from the top unnecessary.

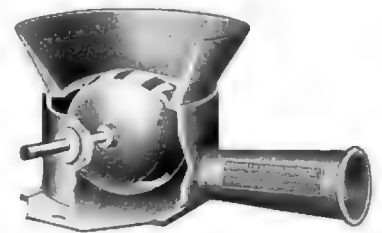
This tuyere when used with the No. 200 Blower has nearly three times the welding capacity of any other standard type tuyere on the market. It takes four-inch iron up to 12 inches long in one heat without moving the iron.



Climax

**Climax**—has revolving clinker-breaker valve. Sliding cover at bottom for removing ashes.

**RR**—This tuyere has clinker-breaking valve, also hinged and balanced ash gate, which opens and closes by a touch of the foot.



EE

**EE**—The bowl of this tuyere is bolted on, and can be removed when desired. A twist of the seven-inch ball valve breaks up the clinker, which falls thru the large slot in bottom of ball. This valve is also used for regulating the size of the fire.

**JJ**—This tuyere has same features as the EE described above and in addition has a blast gate at the side.



RR



JJ

### SPECIFICATIONS

| Name   | Size of Bowl | Blast Pipe Diam. | Depth of Fire Pot | Crated Wgt. |
|--------|--------------|------------------|-------------------|-------------|
| Vulcan | 12½x14 in.   | 3 in.            | 4½ in.            | 55 lbs.     |
| Climax | 8x 7 in.     | 3 in.            | .....             | 30 lbs.     |
| RR     | 12x14 in.    | 3 in.            | 5 in.             | 85 lbs.     |
| EE     | 11 in. diam. | 3 in.            | 4 in.             | 80 lbs.     |
| JJ     | 18 in. diam. | 3 in.            | 8 in.             | 179 lbs.    |

*Buffalo*

# Buffalo Stationary Forges

## TELESCOPIC AND STATIONARY HOODS



For the stationary forges described on the following pages we furnish, when desired, telescopic hoods of the design shown above. These hoods are made of heavy sheet steel, reinforced around the rim of hood and at the ends of the telescopic sections. Counterweight, pulleys and wire rope are included.

We also supply a stationary hood, consisting merely of the canopy with a narrow collar around the top, leaving it to the purchaser to provide vertical pipe connection of a height to suit his shop.

| Telescopic Hood No. | Over-all Diameter | Diameter of Pipe | Maximum Length Pulled Down | Minimum Length | Crated Weight |
|---------------------|-------------------|------------------|----------------------------|----------------|---------------|
| <b>1T</b>           | 26 in.            | 9 in.            | 75 in.                     | 50 in.         | 70 lbs.       |
| <b>2T</b>           | 30 in.            | 10 in.           | 75 in.                     | 50 in.         | 75 lbs.       |
| <b>3T</b>           | 40 in.            | 11 in.           | 80 in.                     | 56 in.         | 110 lbs.      |
| <b>4T</b>           | 51 in.            | 12 in.           | 83 in.                     | 56½ in.        | 145 lbs.      |

| Stationary Hood No. | Diameter Over-all | Diameter of Collar | Crated Weight |
|---------------------|-------------------|--------------------|---------------|
| <b>1S</b>           | 26 in.            | 9 in.              | 20 lbs.       |
| <b>2S</b>           | 30 in.            | 10 in.             | 25 lbs.       |
| <b>3S</b>           | 40 in.            | 11 in.             | 35 lbs.       |
| <b>4S</b>           | 51 in.            | 12 in.             | 50 lbs.       |

*Buffalo*

## Semi-Portable Forges



Buffalo  
No. 36-H  
Forge

These forges are of the semi-portable type that has great adaptability for many shops. The hearths are the same as those listed under the same numbers among the portable forges, but in place of blowers, are equipped with dumping tuyeres and blast connections for air supply from power blowers. The extra heavy construction and bracing of these forges permits handling and hard usage without damage.

The blast connections are 3" in diameter, and are fitted with a lever-controlled blast gate.



Stationary Forge No. 49



Cast Iron Semi-portable  
Forge No. 43-H

| No.  | Construction | Size of<br>Hearth | Kind of<br>Tuyere | Kind of<br>Hood | Crated Weight |
|------|--------------|-------------------|-------------------|-----------------|---------------|
| 35-H | Steel        | 24 x 30 x 3       | Round Pot         | Half Hood       | 120 lbs.      |
| 36-H | Steel        | 24 x 30 x 6       | Vulcan            | Half Hood       | 130 lbs.      |
| 43-H | Cast Iron    | 28 x 40           | Vulcan            | Half Hood       | 240 lbs.      |
| 48-H | Cast Iron    | 38 x 42 x 3       | R. R.             | Half Hood       | 340 lbs.      |
| 49-H | Cast Iron    | 38 x 42 x 7       | R. R.             | Half Hood       | 360 lbs.      |

Water Tanks Extra Equipment  
Clay hearths before using.

*Buffalo*



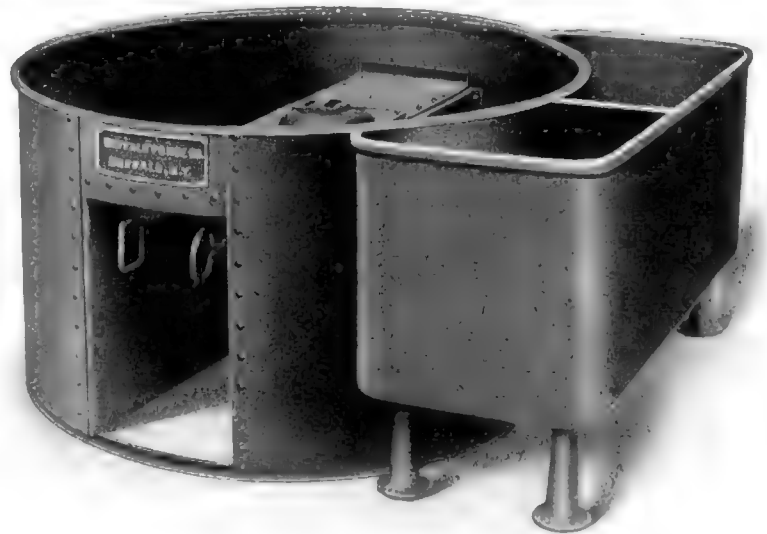
## Stationary Forges Nos. 85 and 86

This forge is designed and built for heavy work.

Built of heavy steel plate, rigidly stiffened and strengthened throughout to meet every strain of service. The edges are reinforced. The hearth may be lined with clay to reduce heat radiation through the sides.

Regularly equipped with anti-clinker dumping tuyere, and blast gate. Steel coal box and water tank can be furnished, if desired, at extra cost.

The No. 85 has a 3 inch and No. 86 a 4 inch blast connection.



| No. | Diameter of Hearth | Kind of Tanks | Size of Coal Box | Size of Water Tank | Net Weight |
|-----|--------------------|---------------|------------------|--------------------|------------|
| 85  | 36 in.             | Steel Plate   | 15 x 10 x 20 in. | 18 x 10 x 15 in.   | 300 lbs.   |
| 86  | 48 in.             | " "           | 20 x 13 x 18 in. | 25 x 13 x 18 in.   | 400 lbs.   |

Clay hearths before using. Water tanks extra equipment.

## Stationary Forges Nos. 885 and 886



These are the Nos. 85 and 86 forges equipped with individual electric blower, otherwise the same construction.

The forge may be set in the location most convenient, without any reference to line shafts, pulleys or the requirements of belting. When placed in position, connections are made by running the wires to the nearest electric circuit. When not in use the current is shut off and no power wasted.

Fitted with Variable or Constant Speed Electric Blower, mounted inside of forge casing, and easily accessible thru door in side of forge, and protected. For convenience, the illustration shows blower outside.

Tanks will be furnished if desired.

| No. | Height to top of Fire Pan | Diameter of Fire Pan | No. Electric Blower | Net Weight |
|-----|---------------------------|----------------------|---------------------|------------|
| 885 | 26 in.                    | 36 in.               | 2E                  | 375 lbs.   |
| 886 | 26 in.                    | 48 in.               | 2EH                 | 440 lbs.   |

Water tanks extra equipment.

Clay hearths before using.

*Buffalo*

## Stationary Forge No. 97

This forge is especially adapted for the heaviest forge shop work. It was originally designed for the shops of the Union Pacific R. R. Co.

The hearth is made of cast iron and is 8 inches deep, but the two gates, one on each side, when opened, lower the sides of the hearth 4 inches. A coal box and water tank are at one end and integral with the hearth. Legs are cast iron.

Furnished regularly with improved tuyere of extra heavy construction, a 4 inch blast connection and lever controlled blast gate.



| No. | Size of Hearth | Height to Top of Forge | Depth of Fire Pit | Blast Connections | Crated Weight |
|-----|----------------|------------------------|-------------------|-------------------|---------------|
| 97  | 49½ x 56½ in.  | 26½ in.                | 8 in.             | 4 in.             | 955 lbs.      |

Clay hearths before using.

## Stationary Forge No. 98



This type of forge will handle extremely heavy work and is a splendid forge for large railroad shops where it is necessary to spring locomotive frames and similar heavy and difficult work. It is advisable to install one of these forges in a shop equipped for light work, to handle heavy work that may come in from time to time.

The frame and hearth are made of cast iron. The fire pot is 8 inches deep while the depth of the fire pan is 4 inches, making a total depth of 12 inches.

Regularly equipped with extra heavy Buffalo anti-clinker tuyere and improved blast gate.

| No. | Size of Hearth | Height to Top of Hearth | Depth of Fire Pit | Blast Connections | Crated Weight |
|-----|----------------|-------------------------|-------------------|-------------------|---------------|
| 98  | 54 x 54 in.    | 24 in.                  | 8 in.             | 4 in.             | 1165 lbs.     |

Clay hearths before using.

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## *Buffalo Hand and Power Drills*

**D**ISPLAYED in the following pages are the drills which users have selected as the most popular numbers we have built.

Each and every one of these machines has been designed and made according to basic "Buffalo" requirements as to strength, ruggedness and ability to stand the continuous service demanded by equipment of this type.

# Buffalo 25-inch Back-geared Upright Power Drill

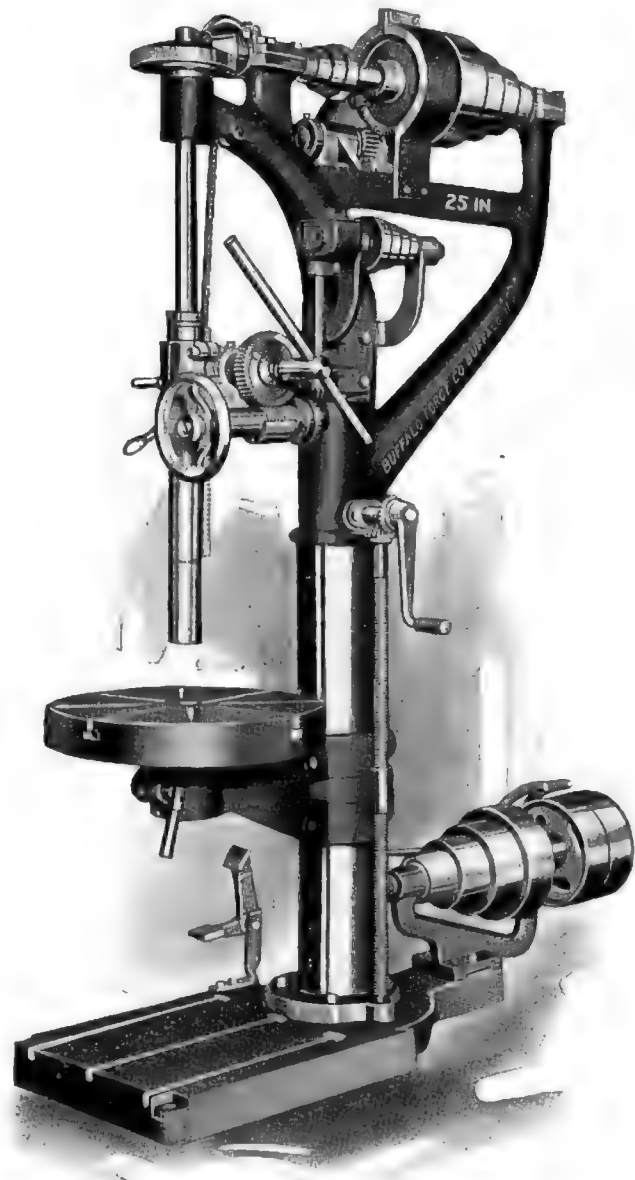
This machine, the largest power drill made by us, has eight speeds and four power feeds, hand and lever feeds.

The sleeve bearing is split and adjustable for wear. The ground spindle has ball bearing thrusts and graduated sleeve. The hand feed lever is adjustable, 6 to 18 inches and is held in place by a tension spring. The worm feed wheel runs in oil and is latch-hinged. All gears are machine cut and made extra heavy. The large crown gear is made of high grade cast iron and runs on a heavy bronze bushing. The screw that operates the table has a ball thrust and is lathe turned. The table arm is drilled by the machine itself, assuring accuracy, while the base and table are T-slotted and planed. Tapping attachment extra. (See page 30.)

All Buffalo drills are tested in operation before leaving the factory and are guaranteed to be satisfactory in every respect.

## SPECIFICATIONS

Height of drill 85 inches  
Capacity—holes up to  $1\frac{1}{4}$  in.  
Drills to center of 25 in. circle  
Greatest distance base to spindle  $44\frac{1}{4}$  in.  
Greatest distance table to spindle 30 in.  
Travel of spindle  $14\frac{1}{2}$  in.  
Size of tight and loose pulleys  $10 \times 3\frac{1}{2}$  in.  
Speed of drive pulleys 300 R.P.M.  
Spindle speeds, Direct, 365, 195, 110, 58.  
Spindle speeds, Back-geared, 70, 38, 22, 12.  
Smallest diameter of cone pulleys 4 in.  
Largest diameter of cone pulleys 10 in.  
Floor space  $20 \times 59$  in.  
Regularly furnished for No. 4 Morse Taper Drills; can also be furnished for No. 3 Morse Taper Drills.  
Style—25 in. back-geared with W. & A. feed and stop. Net weight 1610 lbs., Crated weight 1780 lbs.



This drill can be instantly changed from plain to back-geared drive without using a wrench by disengaging a knurled knob in the top gear and throwing in back gears by means of a hand lever. Locking screw is also provided to hold this arrangement in place. An adjustable automatic trip throws out power feed instantly when piece has been drilled to required depth.

*Buffalo*

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## Buffalo 24-inch Back-geared Upright Power Drill

This machine is built with the same skilled workmanship as employed on all of the Buffalo Power Drills and makes a first class machine shop tool.

The spindle is accurately ground and the sleeve ground and graduated. Spindle has ball bearing thrust. The lever handle is adjustable from 6 to 18 inches and is held in place by a tension spring. The sleeve bearing is split and adjustable for wear. The worm feed gear runs in a continuous bath of oil and is latch-hinged. The crown gear is made of cast iron and runs on heavy bronze bushing.

This drill can be easily changed from plain to back-geared drive without using wrench, by disengaging a knurled knob in the top gear and engaging back gears by means of hand lever. A locking screw is provided to hold this in place. An adjustable automatic trip throws out power feed when piece has been drilled to required depth.

Can be furnished direct connected to motor. Tapping attachment furnished at extra charge. (See page 30.)

### SPECIFICATIONS

Height of drill 83 in.  
Capacity—holes up to  $1\frac{1}{2}$  in.  
Drills to center of 24 in. circle  
Greatest distance base to spindle  $43\frac{1}{2}$  in.  
Greatest distance table to spindle 27 in.  
Travel of spindle  $14\frac{1}{4}$  in.  
Travel of table 28 in.  
Diameter of table  $16\frac{3}{8}$  in.  
Size of tight and loose pulleys 8 x 3 in.  
Speed of drive pulleys 300 R.P.M.  
Spindle Speeds, Direct, 368, 211, 127, 72  
Spindle Speeds, Back-geared, 72, 41, 25, 15  
Smallest diameter of cone pulleys 4 in.  
Largest diameter of cone pulleys 9 in.  
Floor space 47 x 16 in.  
Net weight, 1100 lbs.  
Crated weight, 1270 lbs.  
Regularly furnished for No. 4 Morse Taper Drills; can also be furnished for No. 3 Morse Taper Drills.



This drill has practically all of the advantages of higher priced drills, drilling to the center of a 24 inch circle, with a spindle travel of  $14\frac{1}{4}$ ", and is well suited to handle cylinder re boring work.

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*Buffalo*



# Buffalo 21-Inch Back-geared Upright Power Drill

## WITH GEAR-DRIVEN FEED

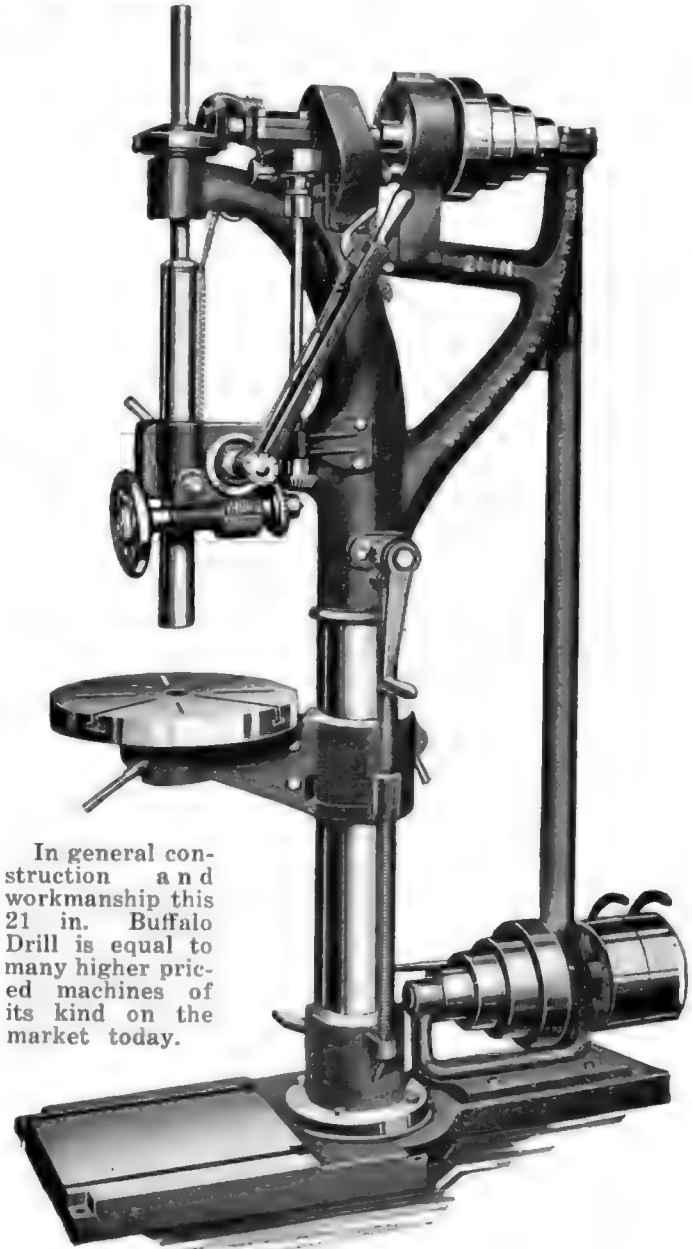
A big, well-balanced and powerful drill with eight speeds, three power feeds and hand and ratchet lever feeds. The power feed is gear-driven, according to the most improved practice, and is silent and durable.

The spindle has a travel of  $12\frac{1}{2}$  inches, which is unusually long. The drill is also arranged so that it can be changed instantly from plain to back-geared drive without using a wrench, by disengaging a knurled knob in the top gear and engaging back gears by means of hand lever. A locking screw is provided to hold this lever in place.

An adjustable, automatic trip throws out the power feed instantly when the piece has been drilled to the required depth.

The sleeve bearing is split and adjustable for wear. The ball bearing spindle is ground—with graduated sleeve. The gears are machine cut, very heavy and guarded. A bath of oil lubricates the latch-hinged worm feed gear. The large crown gears, accurately machined, run on bronze bushing. The screw that operates the table has ball thrust and is lathe turned. The table arm is drilled by the machine itself, assuring accuracy. The base and table are T-slotted and planed, making set-ups very easy.

Can be furnished direct connected to motor. Tapping attachment furnished at extra charge. (See page 30.)



In general construction and workmanship this 21 in. Buffalo Drill is equal to many higher priced machines of its kind on the market today.

### SPECIFICATIONS

Height of drill, 74 in.  
Capacity—holes up to  $1\frac{1}{2}$  in.  
Drills to center of 21 in. circle  
Greatest distance base to spindle, 39 in.  
Greatest distance table to spindle, 22 in.  
Travel of spindle  $12\frac{1}{2}$  in.  
Spindle speeds, direct 368, 211, 127, 72  
Spindle speeds, back-geared, 72.2, 41.4, 24.9, 14.3  
Feed per 1 rev. of spindle, .011, .0072, .0047  
Diameter of table,  $16\frac{1}{2}$  in.

Size of tight and loose pulleys, 8 x 3 in.  
Speed of drive pulleys, 300 R.P.M.  
Smallest diameter of cone pulleys, 4 in.  
Largest diameter of cone pulleys, 9 in.  
Floor space, 16 x 47 in.  
Depth of cone pulley steps,  $2\frac{1}{2}$  in.  
Net weight, 1100 lbs. Crated weight, 1200 lbs.  
Regularly furnished for No. 4 Morse Taper. Can also be furnished for No. 3 Morse Taper.

# Buffalo 20-inch Back-geared Upright Power Drill

The Buffalo 20 in. Drill has eight speeds and three power feeds as well as hand feed and ratchet lever feed.

It can also be instantly changed from plain to back-geared drive without using wrench by disengaging knurled knob in the top gear and throwing in back gears by means of hand lever. A locking screw is also provided to hold this in place.

An adjustable automatic trip throws out power feed instantly when piece has been drilled to required depth.

The sleeve bearing is split and adjustable for wear; the accurately ground spindle has ball bearing thrust and graduated sleeve. The worm feed gear runs in bath of oil and is latch hinged. All gears are machine cut, (extra heavy). Large crown gear is made of high grade cast iron and runs on heavy bronze bushing. The screw that operates table has ball thrust and is lathe turned. Table arm drilled by machine itself, assures accuracy. The base and table are T-slotted and planed.

Can be furnished direct connected to motor. Tapping attachment furnished at extra charge. (See page 30.)

## SPECIFICATIONS

Height of drill 74 in.  
Capacity—holes up to  $1\frac{1}{2}$  in.  
Drills to center of 20 in. circle.  
Greatest distance base to spindle 41 in.  
Greatest distance table to spindle 25 in.  
Travel of spindle  $8\frac{1}{2}$  in.  
Diameter of table  $16\frac{1}{2}$  in.  
Size of tight and loose pulleys 8 x 3 in.  
Speed of drive pulleys 300 R.P.M.  
Spindle Speeds, Direct, 368, 211, 127, 72  
Spindle Speeds, Back-geared, 72, 41, 25, 15  
Smallest diameter of cone pulleys 4 in.  
Largest diameter of cone pulleys 9 in.  
Floor space, 16 x 47 in.  
Depth of cone pulley steps  $2\frac{1}{2}$  in.  
Regularly furnished for No. 4 Morse Taper. Can also be furnished for No. 3 Morse Taper.



All of our drills are built complete in every respect from pattern shop to packing crate in our large, modern factory by skilled workmen who have been building Buffalo Drills for many years.

## This machine made up in five different styles.

| Style  | Net Weight | Crated Weight |
|--|------------|---------------|
| No. 1—20 in. Plain Lever Feed                      | 685 lbs.   | 790 lbs.      |
| No. 2—20 in. Lever and Wheel Feed                  | 730 lbs.   | 835 lbs.      |
| No. 3—20 in. Lever-Wheel-Automatic Feed and stop   | 865 lbs.   | 970 lbs.      |
| No. 4—20 in. Back-geared with wheel and lever feed | 875 lbs.   | 980 lbs.      |
| No. 5—20 in. B. G. with W. and A. F. and Stop      | 900 lbs.   | 1000 lbs.     |

*Buffalo*

# Buffalo 16-inch Bench and Floor Production Drills

*With S K F Ball Bearings and 7" Spindle Travel*

These new sensitive, motor driven drills, appearing for the first time in this catalog, are the perfected result of more than a year's experimental work. Sturdy beyond actual requirements, accurate in every respect, powerful enough to be fast and easy to handle, the 16-inch Bench and Floor Drills are an exceptional value.



Buffalo 16-inch Floor Drill

Three spindle speeds are provided, 418, 835 and 1725 R.P.M. SKF ball bearings are used throughout. Hand lever and foot treadle feed are provided for speed and convenience. Head has a travel of 8½ inches, while spindle travel is 7 inches.

Complete detailed specifications given below:

## SPECIFICATIONS

### Capacity of both models:

½ H.P. Motor. In steel,  
⅞" hole; cast iron, ¾" hole.  
½ H.P. Motor. In steel,  
⅞" hole; cast iron, ¾" hole.  
Motor Speed, 1725 R.P.M.

### 16-INCH BENCH DRILL

Height, 48 in.  
Drills to center of 16 in. circle.  
Greatest distance table to spindle,  
28 in.  
Travel of spindle, 7 in.  
Table stationary  
Adjustment of head, 8½ in.  
Cone pulley on motor, 2¼ in.,  
3¾ in., and 5¾ in. diameter.  
Belt, 2 in. wide.  
Cone pulley on spindle, 5¾ in.,  
7¾ in. and 9¾ in. diameter.  
Base of table, 15¾ x 22½ in.  
Base of table working surface,  
12¾ x 12¾ in.  
Spindle bored for No. 2 Morse Taper.  
SKF bearings throughout.  
Steel column, 4 in. diameter.  
Net weight, 350 lbs.  
Furnished with quick return and  
with or without foot treadle.



Buffalo 16-inch Bench Drill

### 16-INCH FLOOR DRILL

Height, 76 in.  
Drills to center of 16 in. circle.  
Greatest distance base to spindle, 46 in.  
Greatest distance table to spindle, 38 in.  
Travel of spindle, 7 in.  
Adjustment of head, 8½ in.  
Tilting table, 12 in. square.  
Cone pulley on motor 2¼ in., 3¾ in.  
and 5¾ in. diameter.  
Cone pulley on spindle, 5¾ in., 7¾ in.  
and 9¾ in. diameter.  
Floor base, 21 in. diameter.  
Steel column, 4 in. diameter.  
Spindle bored for No. 2 Morse Taper.  
Net weight, 400 lbs.  
Furnished with quick return and with  
or without foot treadle.

*Buffalo*

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## Buffalo 15-inch Upright Power Drill

This drill, designed for accurate and efficient work, is of durable construction throughout. The top spindle bearing is bronze lined. The bearing for upper drive shaft is babbitted and split for easy adjustment, while the main spindle bearing is so adjustable (by means of 3 set screws) that wear can be taken up easily.

The frame of the drill is a one-piece casting of first class grey iron, accurately machined, with the column turned, ground and polished.

The drill has four speeds and the lever handle is adjustable from 6 to 12 inches. The gears are machine cut, and guarded, assuring smoothness in operation and safety.

The spindle is made of high grade steel—accurately ground, with graduated sleeve, the end thrust of spindle being taken on ball bearings as shown in illustration.

A round adjustable table is furnished which can be raised or lowered by means of a screw. A tilting table can be furnished if desired.

The drill is equipped with a belt shifter conveniently located for foot operation.

Can be furnished direct connected to motor at extra charge. (See page 30.)



The spindle is held in position by means of a friction spring which automatically keeps the spindle where it is placed.

### SPECIFICATIONS

Height of drill 72 in.

Capacity—holes up to  $\frac{3}{4}$  in.

Drills to center 15 in. circle

Greatest distance base to spindle 46 in.

Greatest distance table to spindle 33 in.

Travel of spindle 7 in.

Travel of table 29 in.

Diameter of table 12 in.

Size of tight and loose pulleys 6 x  $2\frac{1}{8}$  in.

Speed of drive pulleys 225 R.P.M.

Spindle speed, 330, 210, 130, 85.

Smallest diameter of cone pulleys  $3\frac{7}{8}$  in.

Largest diameter of cone pulleys 8 in.

Floor space 14 x  $32\frac{1}{2}$  in.

Net weight 360 lbs.

Crated weight 450 lbs.

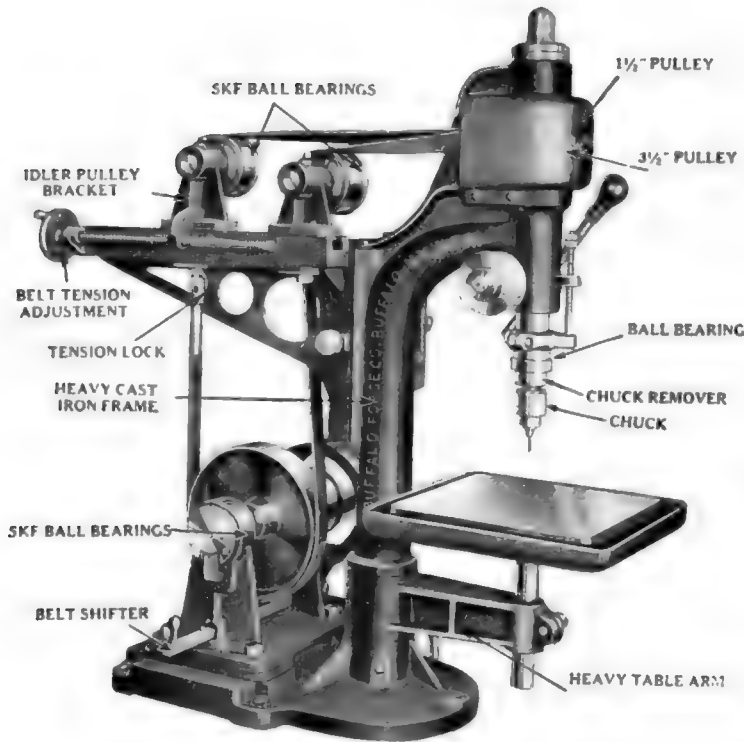
Spindle regularly bored to take No. 2 Morse Taper.

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*Buffalo*

# Buffalo 12-inch Hi-Speed Drill

## 4 Spindle Speeds — 3600,



Speedy operation of all parts of the machine is provided by quick acting screws, clamps and levers.

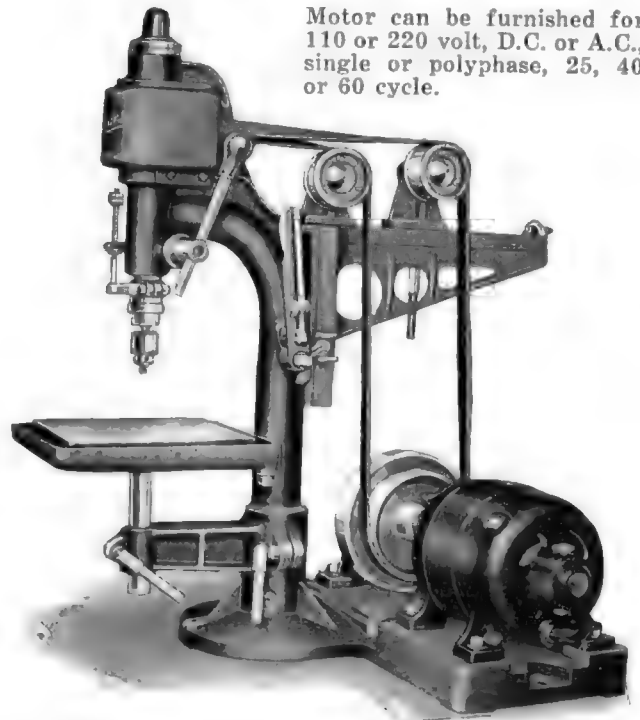
### SPECIFICATIONS

Overall height of drill 34 in.  
 Travel of Spindle 3 1/2 in.  
 Spindle diameter 7/8 in.  
 Maximum height of spindle to table 6 1/2 in.  
 Speed of drive pulleys 1,800  
 Spindle Speeds 10,000, 7,200, 4,800, 3,600 R.P.M.  
 Maximum speed recommended 10,000 R.P.M.  
 Drills to center of circle 12 in.  
 Drills holes up to 5/8 in.  
 Power required 1/2 H.P.  
 Net weight, pulley drive 220 lbs.  
 Crated weight, pulley drive 260 lbs.  
 Net weight, motor drive 270 lbs.  
 Crated weight, motor drive 310 lbs.  
 Equipped with high speed, balanced chuck —capacity up to 5/8\"/>

This machine was designed to do a difficult job in the proper way—to stand up under continuous, hard service, to run smoothly and safely and to drill rapidly thru any material that can possibly be drilled. By means of the two upper spindle pulleys and the two lower drive pulleys, four positive spindle speeds, (3,600, 4,800, 7,200 and 10,000 r.p.m.) are provided. Change from one speed to any other of the four is quickly obtained by means of lever and rapid acting screw.

Each drill is tested at 12,000 r.p.m.,

Motor can be furnished for 110 or 220 volt, D.C. or A.C., single or polyphase, 25, 40 or 60 cycle.



Every part of this drill is exceptionally heavy to stand up under the stresses of high speed operation.

### For Motor Drive

This drill can be furnished for direct motor drive by 1/2 H.P. motor, the motor shaft connecting direct to the drive shaft. Except for the extended base, as shown, the details of motor pulley drive are exactly the same. It is necessary to give complete current characteristics when ordering motor drive.

*Buffalo*



## For use on Bench or Floor

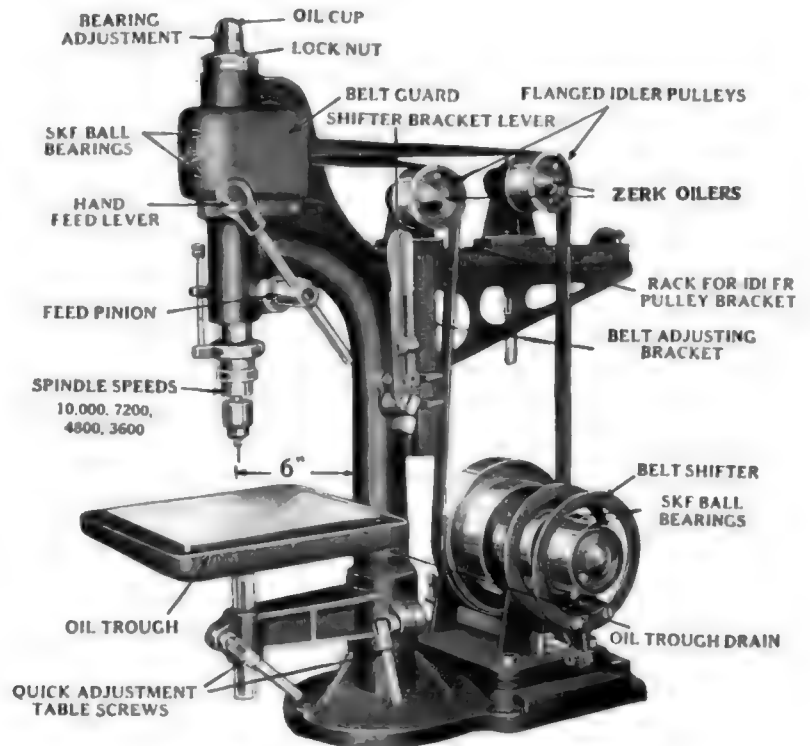
### 4800, 7200 and 10,000 R. P. M.

assuring a positive, dependable margin of safety at its highest operating speed. Eight sets of S.K.F. Ball Bearings, oiled by the Zerk system, provide smooth, trouble-free performance at high speeds.

All parts subject to normal wear are adjustable. Rack and pinion are self adjusting which is very essential to the continuous accuracy of any high speed drill. The oil trough around table has tapped hole for connection to drain tube.



Recirculating pump for cutting compound furnished at extra cost.



Machine furnished as shown, with belt and high speed balanced chuck.

## For Floor Mounting

Both motor and belt driven drills can be equipped with rigid, well balanced pedestals for bolting to floor. The dimensions and weight have been carefully proportioned to afford staple support for the drill at high speeds without carrying excess weight. The pedestal for both motor driven and pulley driven drill are similar except for the removable motor bracket. Can also be furnished with a pump for recirculating the cutting compound. A by-pass valve from pump permits adjustment of the supply at feed nozzle.

### SPECIFICATIONS FOR PEDESTALS

#### Pulley Drive

Weight of pedestal 170 lbs.  
Floor space 14 x 18 ½ in.  
Total height of drill 68 in.  
Total weight of drill 390 lbs.

#### Motor Drive

Height and floor space same as for pulley drive.  
Weight of pedestal 205 lbs.  
Total weight of drill 475 lbs.

*Buffalo*

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## Arrangements for Motor Drive on Power Drills



Above illustration shows standard motor drive arrangement.

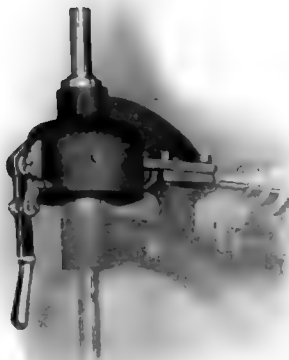
The 25, 24, 21, 20 and 15-inch power drills described and illustrated in the preceding pages are frequently furnished for direct motor drive.

Two methods of mounting motors are illustrated here. At the left is a Buffalo 21-inch power drill with a motor mounted above upper cone pulleys. This method is desirable where floor space is limited or where bulky work is to be handled. This mounting requires an auxiliary bracket, as shown.

If desired we can furnish these drills with motor on a special base, with either gear or silent chain drive as illustrated at right.



The above illustration shows geared motor drive arrangement, which is furnished at an additional charge when desired. Price on application. Complete current characteristics are necessary when ordering.



## Tapping Attachments for Buffalo Power Drills

The Buffalo tapping attachment is made for use on the 20, 21, 24 and 25-inch drills.

It is of standard design, accurate, sturdy, well made, and makes a very useful accessory in any shop.

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*Buffalo*

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## Buffalo 10-inch Three Speed Bench Drill

The Buffalo 10-inch Three Speed Bench Drill is very compact and makes a desirable tool for garages, machine shops, tool rooms, etc. It has a substantial one piece frame, insuring perfect alignment of gears and shafts. The gears are carefully machined and fitted. The upper cone pulley is supported between the bearings instead of being overhung. This type of construction increases the power materially and reduces unnecessary strain on the shaft. Tight and loose pulleys are provided with belt shifter.

The feed lever and spindle are held in position by means of a friction spring which automatically keeps the spindle where it is placed. The work table is adjustable up and down and can be pushed to one side if desired. The base can also be used as a table as it is carefully and accurately planed.



### SPECIFICATIONS

Height of drill 38 in.  
Capacity—holes up to  $\frac{1}{8}$  in.  
Drills to center of 10 in. circle  
Greatest distance base to spindle  $20\frac{1}{2}$  in.  
Greatest distance table to spindle  $14\frac{1}{4}$  in.  
Travel of spindle  $3\frac{1}{2}$  in.  
Size of table 7 x 8 in.  
Size of tight and loose pulleys 4 x  $1\frac{1}{2}$  in.  
Travel of table 14 in.  
Diameter of spindle in sleeve  $\frac{11}{16}$  in.  
Diameter of column  $2\frac{1}{2}$  in.

Regularly furnished for No. 1 Morse Taper Drill; can also be furnished for No. 2 at an extra charge.  
Diameter of crown gear  $2\frac{3}{8}$  in.  
Drill equipped with 3 step cone pulleys  
Diameter of large cone  $4\frac{1}{2}$  in.  
Diameter of intermediate cone  $3\frac{1}{2}$  in.  
Diameter of small cone  $2\frac{1}{2}$  in.  
Spindle speed on high 771 R.P.M.  
Intermediate, 428 R.P.M.  
Low, 305 R.P.M.  
Countershaft run 600 R.P.M.  
Net weight, 110 lbs.  
Crated weight, 120 lbs.

### Motor Driven

When direct motor drive is preferred a special set of cone pulleys is fastened to the motor shaft and belted to the upper cone pulleys. This eliminates gear noises, saves space and delivers the full power of the motor to the belt.

The  $\frac{1}{4}$  H.P., 1750 R.P.M. motor handles the capacity of this drill.

The specifications of the motor drive are same as above except the weights which are as follows:

Net weight  
135 lbs.

Crated weight  
150 lbs.

Complete current characteristics are necessary when ordering.

The 10" Power Drill has two cone pulleys, with the following sizes:  
Small Cone Pulley Diameter,  $2" \times 2\frac{5}{8}" \times 3\frac{1}{4}"$ ; Large Cone Pulley Diameter,  $4\frac{5}{8}" \times 5\frac{1}{4}" \times 5\frac{3}{8}"$ ; Spindle Speed—High 880, Medium 625, Low 435.



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*“Buffalo”*

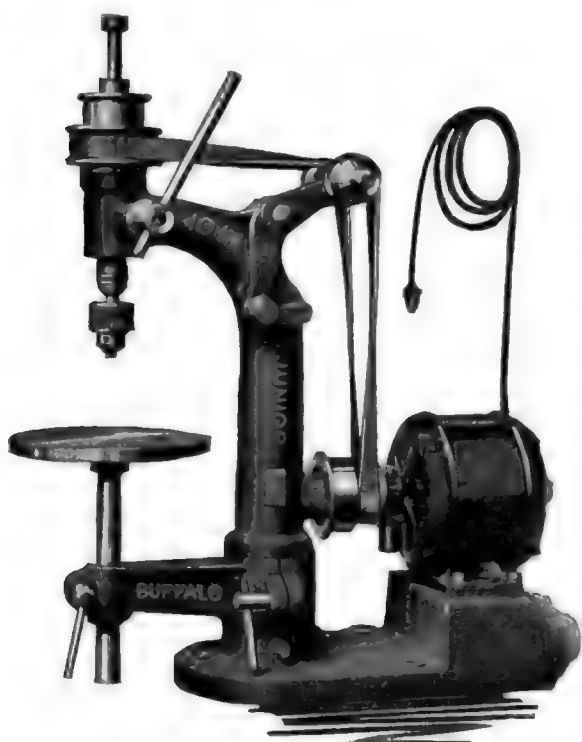
# Buffalo 10-inch Junior Bench Drill

## TWO SPEEDS

The 10-inch Junior Bench Drill is the smallest power drill made by us. It has a substantial one-piece cast-iron frame, assuring rigidity and permanent alignment. The spindle is of steel, accurately finished and running in large bronze bearings. All pulleys are accurately balanced, permitting high speed operation. The adjustable table, 8" in diameter, has a vertical travel of 7" and can be swung entirely out of the way if desired. When ordered No. 2-A Jacobs Chuck will be furnished on pulley driven drill at extra cost.

Not necessary to loosen idler pulley—when shifting speeds, snap socket holds idler in either position—no wrenches needed.

This drill is very popular in radio shops, pattern shops, machine shops, garages, tool rooms, etc., because of its accuracy, light weight and simplicity in handling on holes up to  $\frac{1}{2}$  inch.



The spindle speed of the 10" Junior Standard Motor Drive is 1000 R.P.M., slow speed and 2100 R.P.M., fast speed. Furnished complete with chuck, belt and switch—ready for the job.



PULLEY DRIVE

### SPECIFICATIONS

Height of drill 27  $\frac{1}{2}$  in.  
Capacity—holes up to  $\frac{1}{2}$  in.  
Drills to center of 10 in. circle  
Greatest distance table to spindle 8 in.  
Travel of spindle 3  $\frac{1}{2}$  in.  
Diameter of table 8 in.  
Size of tight and loose pulleys 4 x 1  $\frac{1}{2}$  in.  
Vertical movement of spindle 3  $\frac{1}{2}$  in.  
Vertical movement of table 7 in.  
Distance center of spindle to frame 5 in.  
Speed of driving pulleys 550 R.P.M.  
Net weight, pulley driven, 66 lbs.  
Crated weight, pulley driven, 78 lbs.  
Net weight, motor driven, 100 lbs.  
Crated weight, motor driven, 130 lbs.

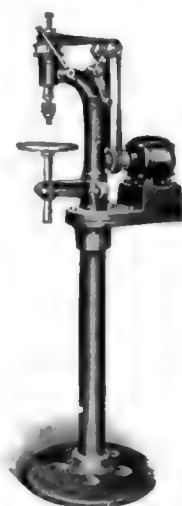
### Motor Driven

The 10-inch Junior Bench Drill described above is also furnished for direct motor drive by connecting  $\frac{1}{4}$  H.P. Motor, as shown.

This machine can be made to run 850 R.P.M. low, 1450 R.P.M. high, with the addition of a special cone pulley on spindle at an extra charge.

Spindle fitted with No. 2-A Jacobs chuck.

Complete current characteristics are necessary when ordering.



"Buffalo" 10" Junior Bench Drill mounted on Pedestal. Furnished only when ordered, Extra charge.

*Buffalo*

## Buffalo Ball Bearing Drill No. 124

This drill has a sturdy, cast iron frame mounted on a heavy post. It has two speeds, which can be changed from one to another by means of a sliding collar, located behind the spindle.

Has hand and automatic feeds. The hand feed has four-arm lever while the automatic feed is adjustable. All gears are machine cut and guarded. The capstan lever can be placed at either right or left hand side. A slotted adjustable table is furnished.

Four step cone pulleys and countershaft supplied if desired.

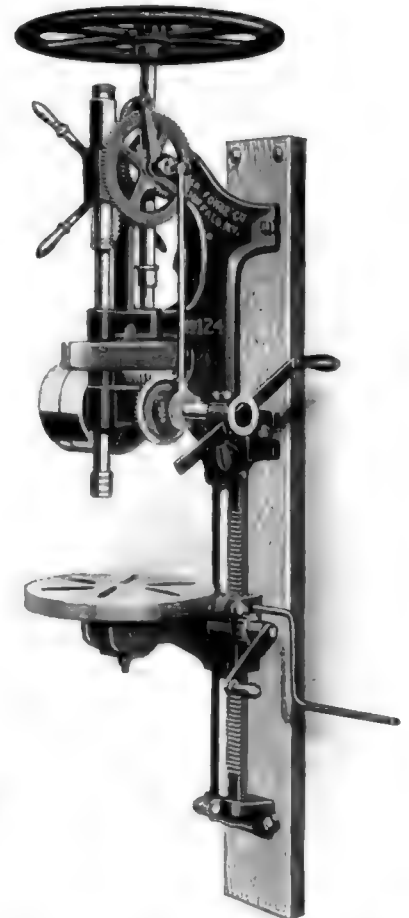
### SPECIFICATIONS

Drills to center of 24 in. circle  
Drills holes up to 1½ in.  
Diameter of spindle 1¼ in.  
Run of feed 7½ in.  
Run of table 16½ in.  
Length 68 in.  
Pulley 8 x 3 in.  
Pulley speed 100-125 R.P.M.

Furnished with chuck bored for ½ in. straight shank bits. Can also be bored for 41/64 in. or Nos. 1, 2, 3 or 4 Morse Taper at an extra charge.

124 (Hand Power) net weight 360 lbs.; crated weight, 435 lbs.

124-A (With Pulleys) net weight 380 lbs.; crated weight, 455 lbs.



## Buffalo Capstan Lever Drill No. 117

This is the smallest capstan lever drill made by us. The frame is heavily ribbed and all bearings bored and reamed in solid metal of frame. A ball bearing takes up thrust between feed rack and spindle and eliminates about 90% of the friction.

It has two speeds which are obtained by shifting crank from front to back gear. An idler between the gears permits crank to be turned forward with both speeds. A sliding collar on feed head gives a quick and simple change from hand to automatic feed. Slotted adjustable table furnished.

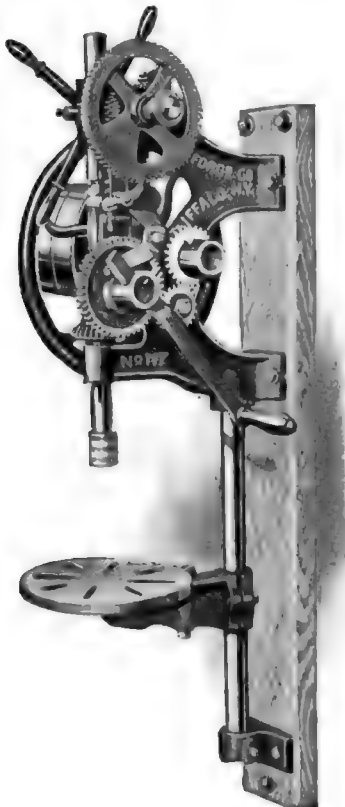
### SPECIFICATIONS

Drills to center 17 in. circle  
Drills holes up to 1¼ in.  
Spindle diameter 1¼ in.  
Run of feed 6 in.  
Run of table 13 in.  
Length overall 50 in.  
Pulley size 8 x 3 in.

Furnished with chuck for ½ in. straight shank bits. Can also be had for 41/64 in. and Nos. 1, 2 or 3 Morse Taper at an extra charge.

No. 117 (Hand Power) net weight, 143 lbs.; crated weight, 175 lbs.

No. 117A (With Pulley) net weight, 163 lbs.; crated weight, 195 lbs.



*Buffalo*



## Buffalo Ball Bearing Drill No. 515

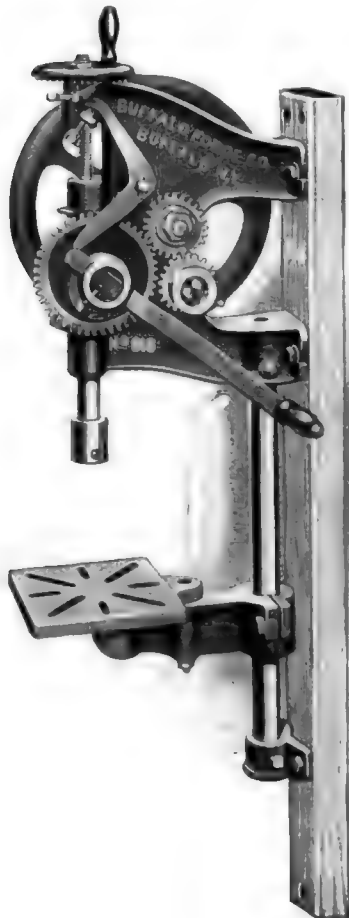
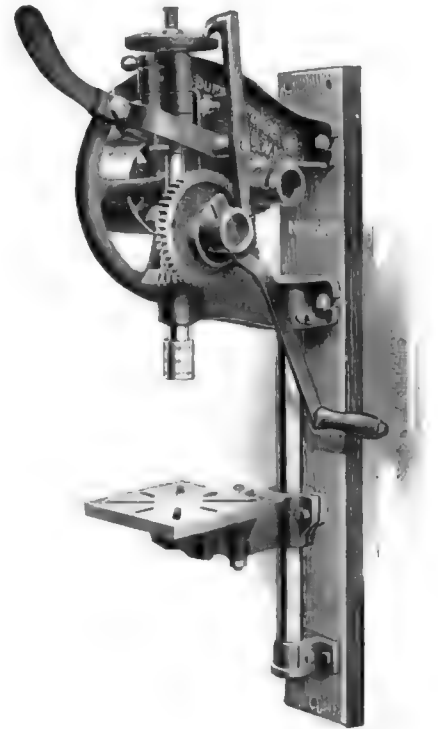
This drill has a heavy cast iron frame, mounted on a large hardwood post and will stand up under continuous hard service. All bearings are bored and reamed in solid metal frame. It has two speeds which are obtained by changing crank from front to back gear.

A quick change from lever to automatic feed or vice versa is easily obtained at the feed screw head. The spindle can be returned to the highest point of travel instantly. Cast gears mesh perfectly. A square slotted adjustable table furnished.

### SPECIFICATIONS

Drills to center of 15 in. circle  
Drills holes up to  $1\frac{1}{4}$  in.  
Spindle diameter  $1\frac{1}{8}$  in.  
Run of feed 3 in.  
Run of table  $9\frac{1}{2}$  in.  
Length overall 38 in.  
Pulley diameter 6 in.

Furnished with chuck for  $\frac{1}{2}$  inch straight shank bits.  
Can also be furnished for  $\frac{5}{8}$ ,  $41/64$  in. or Nos. 1, 2, or 3 Morse Taper at an extra charge.  
No. 515 (Hand Power) net weight, 120 lbs. Crated weight, 160 lbs.  
No. 515-A (With Pulleys) net weight 140 lbs. Crated weight, 180 lbs.



## Buffalo Ball Bearing Drill No. 616

The shafts and spindle of this drill are steel, machined and fitted, with all bearings bored and reamed in solid metal of frame. It has two speeds and is back-geared. A quick change from one to another is easily obtained by shifting the crank from front to rear gear or return.

Two feeds, hand and automatic, are provided. A small adjusting screw at feed screw head allows automatic feed to be adjustable to three speeds. The end thrust is taken up by hardened steel balls between feed screw and spindle, reducing considerable friction.

A square slotted adjustable table is supplied. Can be furnished with or without loose pulley.

### SPECIFICATIONS

Drills to center 16 in. circle  
Drills holes up to  $1\frac{1}{4}$  in.  
Spindle diameter  $1\frac{1}{8}$  in.  
Run of feed  $3\frac{1}{4}$  in.  
Run of table 10 in.  
Length overall 38 in.  
Diameter of pulley 6 in.

Furnished with chuck for  $\frac{1}{2}$  in. straight shank bits. Can also be bored for  $41/64$  in. or Nos. 1, 2, or 3 Morse Taper at an extra charge.  
No. 616 (Hand Power) net weight, 98 lbs. Crated weight, 115 lbs.  
No. 616-A (With Pulleys) net weight, 110 lbs. Crated weight, 127 lbs.

*Buffalo*

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## Buffalo Ball Bearing Drill No. 614-R

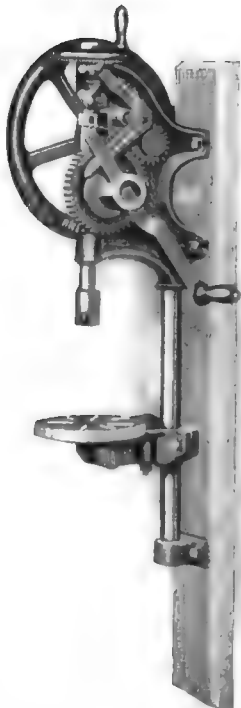
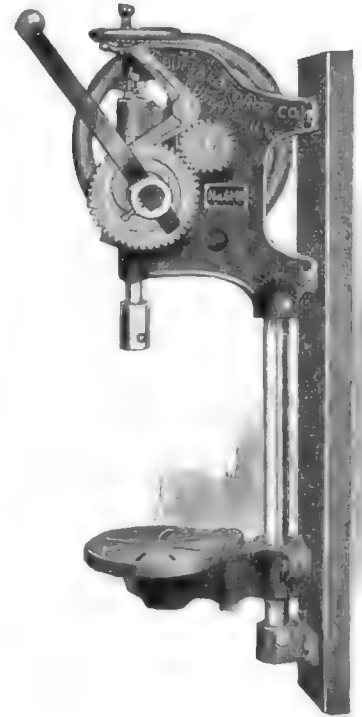
This machine has a strongly ribbed cast iron frame mounted on a substantial post. The shaft and spindle are of steel, finely finished and carefully fitted.

Both hand and automatic feeds are provided—the latter being adjustable to three speeds. It has one spindle speed. A hardened steel ball bearing takes up friction between spindle and feed screw. An adjustable, slotted table is furnished. Fitted regularly with a  $\frac{1}{2}$  inch straight shank drill.

### SPECIFICATIONS

Drills to center of 14-inch circle  
Drills holes up to  $1\frac{1}{4}$  inches  
Spindle diameter 1 inch  
Run of feed 3 inches  
Run of table  $10\frac{1}{4}$  inches  
Length overall 38 inches

Furnished with chuck for  $\frac{1}{2}$  inch straight shank bits.  
Can also be bored for  $\frac{41}{64}$  inch or Nos. 1, 2 or 3 Morse Taper at an extra charge.  
Net weight, 83 lbs.  
Crated weight, 98 lbs.



## Buffalo Ball Bearing Drill No. 612

This drill is a good substantial machine built to stand up under continuous, hard usage. It has a sturdy cast iron frame, with a steel shaft and spindle, accurately machined, fitted and finished. All bearings are bored and reamed in the solid metal frame.

Two feeds, hand and automatic, are provided; the latter being adjustable to three speeds. A round, slotted table is furnished. Fitted with chuck for  $\frac{1}{2}$ " straight shank bits.

### SPECIFICATIONS

Drills to center 12 inch circle  
Drills holes up to 1 inch  
Spindle diameter  $1\frac{1}{8}$  inches  
Run of table 10 inches  
Run of feed  $2\frac{3}{4}$  inches  
Length overall 35 inches

Furnished with chuck for  $\frac{1}{2}$  inch straight shank bits. Can also be bored for  $\frac{41}{64}$  inch or Nos. 1, 2 or 3 Morse Taper at an extra charge.  
No. 612 (Hand Power) net weight, 71 lbs. Crated weight, 86 lbs.

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*“Buffalo”*

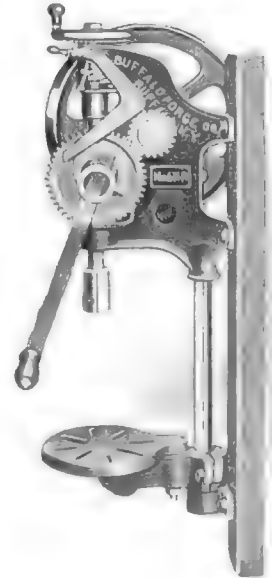
## Buffalo Ball Bearing Drill No. 611-R

The frame of this machine is strongly ribbed, with steel shaft and spindle, carefully fitted and finely finished. The end thrust of spindle is taken up by ball bearings, eliminating 90% of all the friction at this point. All the bearings are bored and reamed in the solid metal of frame. The gears are well made and carefully fitted. Has both hand and automatic feeds—the latter being adjustable to three speeds. A round, slotted, adjustable table is provided. Fitted regularly with a Buffalo chuck.

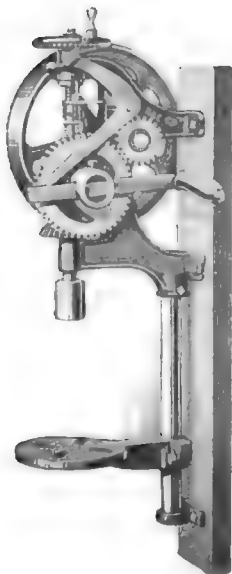
### SPECIFICATIONS

Drills to center of 11 inch circle  
Drills holes up to  $\frac{3}{4}$  inch  
Spindle diameter  $\frac{7}{8}$  inch  
Run of feed 3 inches  
Run of table 10 inches  
Length overall 33 inches

Furnished with chuck for  $\frac{1}{2}$  inch straight shank bits. Can also be bored for 41/64 or No. 1 or 2 Morse Taper at an extra charge.  
Net weight, 68 lbs.  
Crated weight, 75 lbs.



## Buffalo Ball Bearing Drill No. 61-R and 65-R



**No. 61-R**—A sturdy, well made machine that is very useful in every shop. It has a cast iron frame with all bearings being bored and reamed, assuring smooth, easy running. The shaft and spindle are of steel, extra heavy and carefully finished. Accurately fitted gears and a medium weight flywheel aid in simplicity of the operation. Has a combination cast iron table and fork, which is adjustable to any position.

**No. 65-R**—Similar to 61-R except it has two speeds, a sheet steel table and cast iron fork. This permits table to be taken off and enables rims of wheels, etc., to be drilled on fork. It cannot, however, be furnished with pulleys unless the handle is taken off.

The end thrust of both of these drills is taken up by ball bearings, eliminating 90% of all the friction at this point.

### SPECIFICATIONS

Drills to center of 11  $\frac{1}{2}$  inch circle  
Drills holes up to  $\frac{5}{8}$  inch  
Spindle diameter,  $\frac{7}{8}$  inch  
Run of feed, 3 inches  
Run of table, 9 inches  
Length overall 32 inches  
Size of pulleys (61-A) 6 x 2  $\frac{1}{4}$  inches

Spindle bored for  $\frac{1}{2}$  inch straight shank bits. Can be bored also for 41/64 inch,  $\frac{5}{8}$  inch or Nos. 1 or 2 Morse Tapers at an extra charge.

| Drill No.           | Net Weight | Crated Weight |
|---------------------|------------|---------------|
| 61-R (Hand Power)   | 55 lbs.    | 63 lbs.       |
| 61-A (Hand & Power) | 60 lbs.    | 66 lbs.       |
| 65-R (Hand Power)   | 53 lbs.    | 61 lbs.       |

*Buffalo*

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## *Buffalo Hand Power Punches, Shears, Bar Cutters and Benders*

**T**HE portable hand-power punches, shears and bar-cutters shown in this section are built to meet every shop requirement for punching and cutting metal. They combine "Armor-Plate", guaranteed unbreakable, all-steel frames with inherent light weight, and compounded leverage that makes cutting and punching to the full capacity of the machine easy and positive. Clean holes and cuts are certain.

Buffalo machines occupy very little floor space and weigh far less than cast-iron machines of similar capacity—but are more than seven times as strong.

Modern production methods enable us to sell these machines at a very reasonable price, assuring the user of exceptional value.

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The logo for Buffalo, featuring the word "Buffalo" in a stylized, cursive script font. The letter "B" is large and prominent, with a diagonal line striking through it from the bottom left to the top right. The rest of the word "uffalo" follows in a similar cursive style.

## Buffalo Open Throat Combination Angle and Tee Cutter

The big feature about this machine is its open throat. This permits the entering of material from the front of the machine instead of inserting it through the sides, as is the case with most angle cutters. This feature reduces wear and tear on the knives, consequently prolonging their life, and also makes it possible to do the work in much less space than with machines where the material is run in from the side, over the knives. Saves considerable time, material and labor.



These machines are mounted on the special Buffalo 2-piece angle iron legs which are very rigid, and light. Drilled for bolting to the floor.

Each machine tested in excess of capacity. Can be furnished as illustrated or for bench use only.



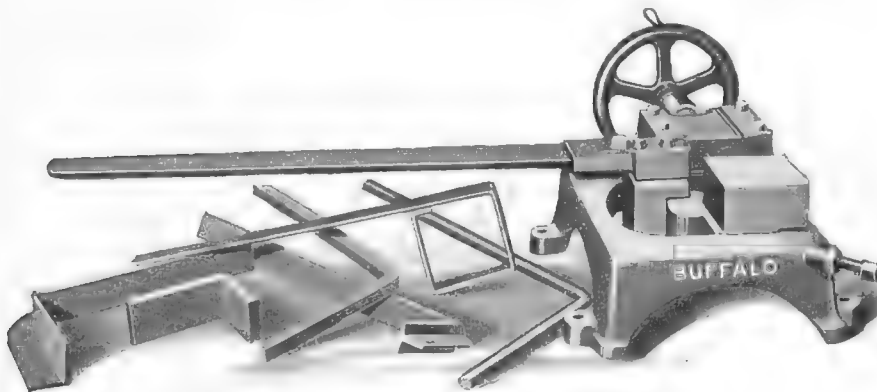
By use of the pawl and ratchet a much greater leverage is obtained, thereby making it possible to punch and shear heavy stock with little effort.

| No. | Angles                | CUTS                  |  | Flats         | Punches<br>Holes | Net<br>Weight | Crated<br>Weight |
|-----|-----------------------|-----------------------|--|---------------|------------------|---------------|------------------|
|     |                       | Tees                  |  |               |                  |               |                  |
| 1   | 1 3/4 x 1 3/4 x 1/16" | 1 1/4 x 1 1/4 x 1/16" |  | 1 1/4 x 3/8"  | 1/2 x 1/16"      | 113 lbs.      | 118 lbs.         |
| 2   | 2 1/2 x 2 1/2 x 1/4"  | 1 3/4 x 1 3/4 x 1/16" |  | 1 3/4 x 1/2"  | 1/2 x 1/16"      | 175 lbs.      | 180 lbs.         |
| 3   | 3 x 3 x 3/8"          | 2 1/4 x 2 1/4 x 1/4"  |  | 2 1/2 x 1/16" | 5/8 x 3/8"       | 440 lbs.      | 448 lbs.         |

Angle Knives are Standard equipment—Tee Knives furnished at extra cost. Punching attachment also extra.

## Buffalo Angle and Tee Bender

Buffalo No. 2 Angle and Tee Bender will bend angles up to 2 1/2 x 2 1/2 x 1/4" and tees up to 2 1/2 x 2 1/2 x 1/4". A sturdy, cast-iron frame, together with two steel forming blocks and steel lever assures accuracy in bending and makes it possible to bend squares as small as 8" on the inside. A very handy tool for structural work in connection with our power machines.



The same blocks can be used for bending both angles and tees.

Bends tees, leg in or out, up to 2 1/2 x 2 1/2 x 1/4".

Bends Angles, leg in or out, up to 2 1/2 x 2 1/2 x 1/4".

Bends Flats up to 3" x 1".

Bends Rounds up to 1 1/2".

Bends Squares up to 1 1/4".

Width 22", length 30", Shipping weight 400 lbs.

All stock must be heated to a cherry red.

*"Buffalo"*



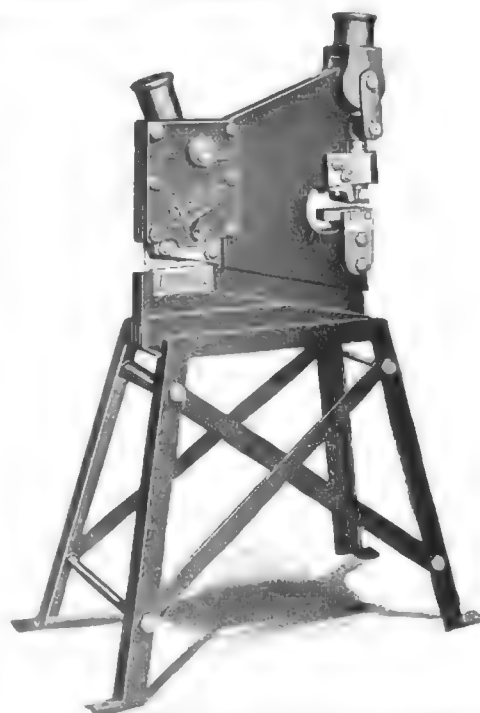
## Buffalo "Armor-Plate" Combination Punch Shear and Bar-Cutter

This double end machine meets the requirements of three machines, a slitting shear, a punch and a barcutter. The frame, made of "Armor Plate" steel is guaranteed forever against breaking under any conditions. The leverage, although simple, is very powerful and has no parts to get out of order. Heavy angle iron legs are supplied.

The offset in the frame prevents the stock from binding when shearing plates, and guides the plate accurately along a straight line. Punches and dies are of the best crucible steel, carefully ground and tempered.

This machine regularly furnished with  $\frac{1}{4}$ ",  $\frac{5}{16}$ " and  $\frac{3}{8}$ " punches with dies to fit.

| No.  | Punches                            | Plates          | SHEARS<br>Rounds | Flats                               | Throat | Net<br>Weight | Crated<br>Weight |
|------|------------------------------------|-----------------|------------------|-------------------------------------|--------|---------------|------------------|
| 22SP | $\frac{3}{8} \times \frac{1}{4}$ " | $\frac{1}{4}$ " | $\frac{5}{8}$ "  | $2\frac{1}{2} \times \frac{1}{4}$ " | 4"     | 215 lbs.      | 235 lbs.         |

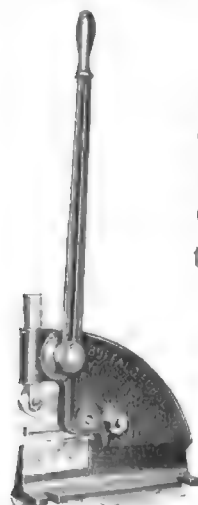


Plates of any width or length may be cut on this machine as well as rounds and flats.

## Buffalo Bench Type Slitting Shears

Buffalo No. 14 Slitting Shear, the smallest hand power unit made by us, is 6 inches long and  $5\frac{1}{4}$  inches high (without handle). The frame is a high grade drop forging and leverage is so powerfully compounded that it will cut 16 gauge sheets, taking  $1\frac{3}{4}$  inch cut per stroke. This powerful little tool will also shear  $\frac{3}{4} \times \frac{1}{8}$ " flats in a single stroke. Occupies little space and will more than pay for itself in a very short time. Shipping weight 20 lbs.

Both Shears are very handy for shops where considerable strand or solid wire is cut. The No. 14 Shear will cut wire up to No. O, while the 19-A will cut No. OOOO wire and No. 14 BX Cable.



No. 19A Shear

The No. 19A Shear is a very useful bench tool for any shop where quantities of sheets, flats and rounds are cut. It has a cast steel frame and plunger guide, and a powerfully compounded leverage by means of steel lever and rack and pinion. A stripper outside prevents binding of metal and a slotted base permits shear to be bolted to table. Will stand unusually hard and continuous service.



No. 14 Shear. A strong, efficient shear that occupies very little bench space.

Shears and Slits #12 gauge sheets.

Cuts Rounds  $7/16$ ".

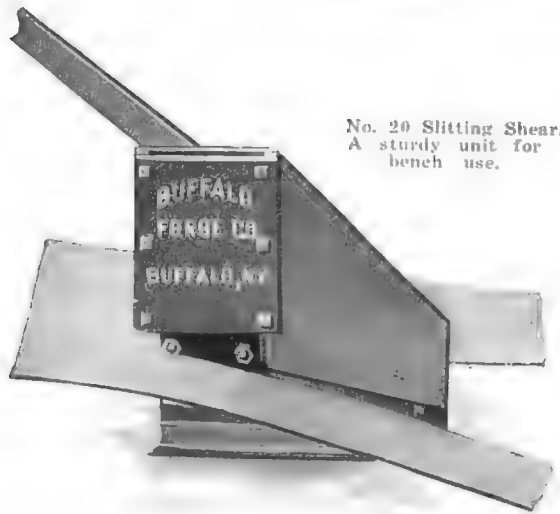
Cuts Flats  $\frac{3}{4} \times \frac{1}{4}$ ".

Length of Knives 4-3  $1/16$ ".

Shipping Weight 40 lbs.

**"Buffalo"**

## Buffalo "Armor-Plate" Slitting Shears



No. 20 Slitting Shear.  
A sturdy unit for  
bench use.

The working parts are steel and cut the metal absolutely straight and clean.

The No. 23 Slitting Shear is one of the most powerful hand operated machines being used today. It has two levers, one direct acting for light work, the other one giving a compound

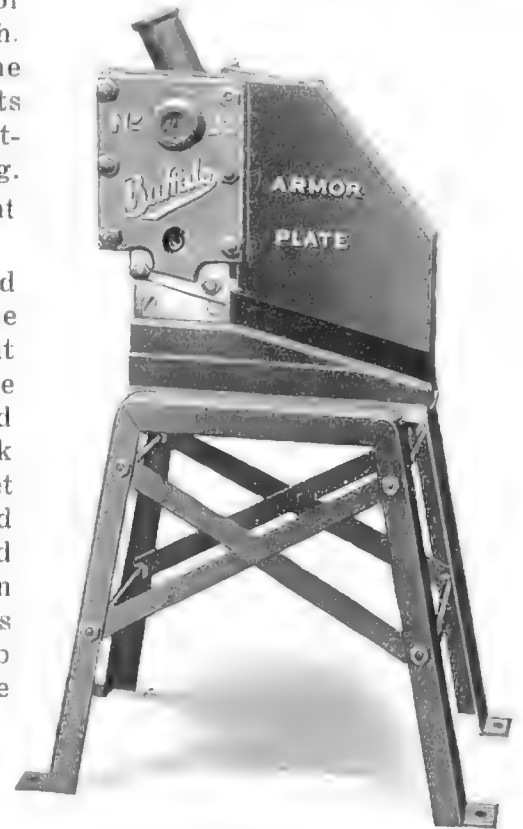
leverage for heavy work by means of a ratchet keyed to the axis and operated by a lever and pawl. Though light in weight, this machine is guaranteed to stand up under the most severe service.



No. 23 Slitting Shear. Can also be furnished without stand.

Buffalo No. 20 Slitting Shear has an "Armor Plate" frame, guaranteed for life against breakage. The knives are made of crucible steel. The leverage is so compounded that cuts up to the full capacity are made with little effort. The plunger is actuated by an eccentric and moves in machined guide.

The No. 22 Slitting Shear is a larger, more powerful machine, mounted on extra heavy angle iron legs. The knife plunger is operated by an eccentric, working on the principle of a power punch. The offset in the frame prevents binding of the metal when cutting.



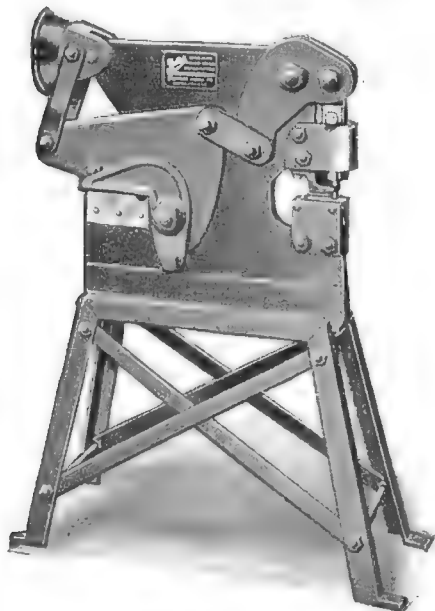
No. 22 Slitting Shear can cut sheets of any length or width. Cuts rounds up to  $\frac{5}{8}$  inch. Can also be furnished without stand.

| No. | Type  | CUTS             |                       |                                      | Net Weight | Crated Weight |
|-----|-------|------------------|-----------------------|--------------------------------------|------------|---------------|
|     |       | Rounds           | Plates                | Flats                                |            |               |
| 20  | Bench | ....             | $\frac{1}{8}$ " thick | $2\frac{1}{2} \times \frac{1}{8}$ "  | 30 lbs.    | 35 lbs.       |
| 20C | Legs  | ....             | $\frac{1}{8}$ " thick | $2\frac{1}{2} \times \frac{1}{8}$ "  | 65 lbs.    | 70 lbs.       |
| 22  | Legs  | $\frac{5}{8}$ "  | $\frac{1}{4}$ " thick | $2\frac{1}{2} \times \frac{5}{16}$ " | 110 lbs.   | 115 lbs.      |
| 23  | Legs  | $1\frac{1}{2}$ " | $\frac{3}{8}$ " thick | $2\frac{1}{2} \times \frac{1}{2}$ "  | 250 lbs.   | 260 lbs.      |

With special knives, No. 23 also cuts Angles up to  $1\frac{1}{2}$ " x  $\frac{1}{4}$ " and Squares up to  $\frac{3}{4}$ ".

**Buffalo**

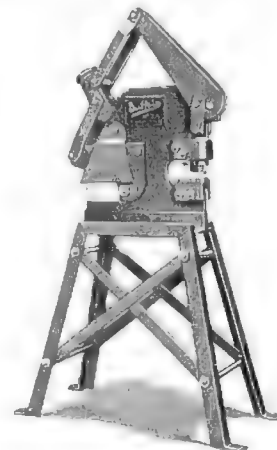
## Buffalo "Armor-Plate" Combination Punch and Shears



Twin socket lever operates both punch and shear on Nos. 103-B and 104-B machines.

These three machines, the most popular hand power combination machines made by us, have "Armor-Plate" frames, which have a tensile strength of 75,000 pounds (over seven times stronger than cast-iron).

The leverage is simple and powerful. The knives, punches and dies are of the best quality crucible steel, carefully ground and tempered. The punches and shears on these machines do clean, accurate work up to their full capacities. Extra heavy angle iron stand furnished.



No. 2B Punch and Shear with compounded leverage.

| No.  | Punches    | Flats          | Punches Furnished | Throats | Net Weight | Crated Weight |
|------|------------|----------------|-------------------|---------|------------|---------------|
| 2B   | 1/4 x 1/4" | 2 x 1 5/8"     | 1/8, 1/16, 1/4"   | 3 3/4"  | 120 lbs.   | 128 lbs.      |
| 103B | 3/8 x 3/8" | 2 1/2 x 1 1/2" | 1/4, 1/16, 3/8"   | 4"      | 200 lbs.   | 212 lbs.      |
| 104B | 1/2 x 1/2" | 3 x 5/8"       | 1/4, 3/8, 1/2"    | 5 1/4"  | 362 lbs.   | 380 lbs.      |

## Buffalo "Armor-Plate" Punches

Buffalo Punches Nos. 13 and 14 are particularly suitable on a one-man job. They are simple to operate and the leverage on both is so arranged that punching up to the machines full capacity is easily handled. Regularly furnished with extra heavy angle iron legs.

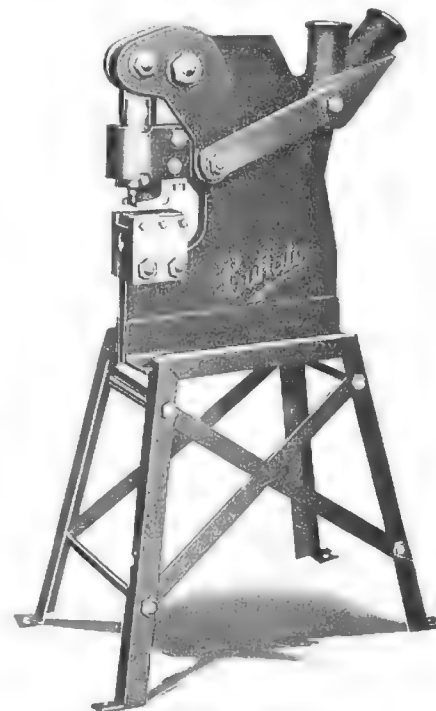


No. 14 Punch. A strong, efficient machine that occupies very little floor space.

| No. | Punches    | Depth of Throat | Type Lever | Punches Furnished | Net Weight | Crated Weight |
|-----|------------|-----------------|------------|-------------------|------------|---------------|
| 13  | 1/4 x 1/4" | 4"              | Front      | 1/8 & 1/4"        | 75 lbs.    | 80 lbs.       |
| 14  | 3/8 x 3/8" | 4 1/4"          | Front      | 1/8 & 3/8"        | 104 lbs.   | 110 lbs.      |

Buffalo Punch No. 115B is similar to Nos. 13 and 14 except it has a back lever instead of the front lever, a necessary arrangement when working large plates.

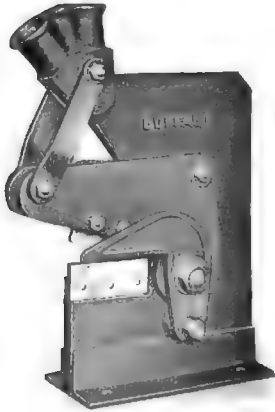
| No.  | Capacity up to | Throat | Punches        | Net weight | Crated weight |
|------|----------------|--------|----------------|------------|---------------|
| 115B | 1/2 x 1/2"     | 5 1/4" | 1/4, 3/8, 1/2" | 225 lbs.   | 260 lbs.      |



No. 115-B Punch. All fittings steel and accurately machined.

*Buffalo*

## Buffalo "Armor-Plate" Shears



Buffalo Shear No. 101. A strong, indestructible unit that will last a life time.

If you do erecting work of any kind, where quantities of flats and rounds must be cut, you will find the Buffalo "Armor-Plate" Shears Nos. 103 and 104 just the machines you are looking for. The leverage is powerfully compounded. A stripper on the side prevents binding. Made to stand exceptionally hard abuse.

| No.  | Mounted on       | Cuts Flats up to |
|------|------------------|------------------|
| 103  | Bench            | 2 1/2 x 1/2 "    |
| 103C | Angle Iron Stand | 2 1/2 x 1/2 "    |
| 104  | Bench            | 3 x 5/8 "        |
| 104C | Angle Iron Stand | 3 x 5/8 "        |

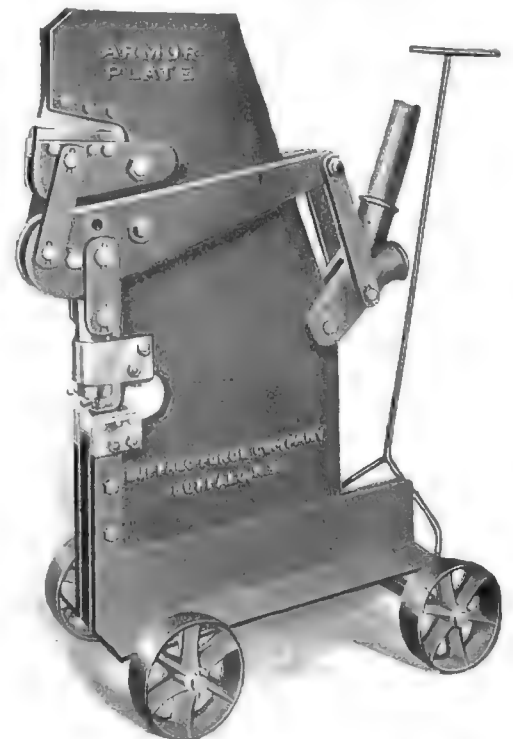
| Cuts Rounds<br>(with Special Knives) | Net Weight | Crated Weight |
|--------------------------------------|------------|---------------|
| 3/4 "                                | 112 lbs.   | 120 lbs.      |
| 3/8 "                                | 138 lbs.   | 146 lbs.      |
| 1 "                                  | 203 lbs.   | 212 lbs.      |
| 1 "                                  | 232 lbs.   | 242 lbs.      |

Knives for cutting rounds are extra.

## Buffalo "Armor-Plate" Punch, Shear and Bar-Cutter

A very powerful hand operated punch, shear and barcutter. The frame is of "Armor-Plate," over seven times stronger than cast-iron, and strengthened below the die with reinforcing plates, welded to both sides of the frame. The shear blades, punch and die are of a crucible steel. A double socket lever admits of the most efficient application of power, the back brace preventing the possibility of up-ending. Heavy angle irons form a rigid base.

Can be furnished with or without truck.



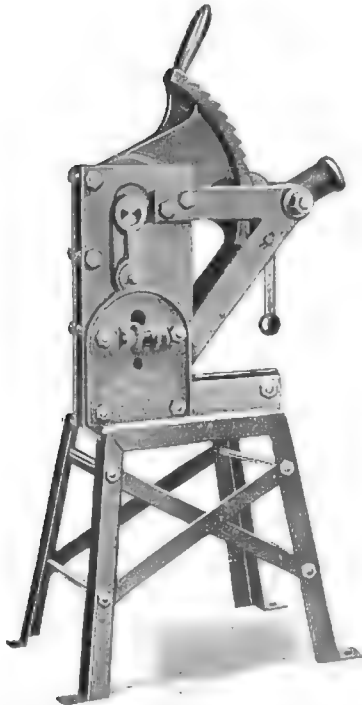
Will cut bars to maximum capacity with comparative ease.

| No. | Punches     | Cuts Flats | Cuts Rounds | Punches Furnished    | Depth of Throat | Shipping Weight |
|-----|-------------|------------|-------------|----------------------|-----------------|-----------------|
| 5   | 3/4 x 1/2 " | 6 x 1/2 "  | 1 "         | 3/8, 1/2, 5/8, 3/4 " | 7 "             | 780 lbs.        |
| *5  | 3/4 x 1/2 " | 6 x 1/2 "  | 1 "         | 3/8, 1/2, 5/8, 3/4 " | 7 "             | 860 lbs.        |

\*on truck

**Buffalo**

## Buffalo "Armor-Plate" Contractor's Bar-Cutter



The frames of these machines are made of the light but guaranteed unbreakable "Armor Plate" steel, rigidly bolted together, enclosing the working parts. Two sets of knives are provided for cutting light, medium and heavy bars. A stripper prevents binding of the metal. A handle provides for dropping the segment back into place after each cutting.

These machines are regularly equipped with sturdy, angle iron legs which are drilled for bolting down.

| No.  | Type                    | Cuts Twisted Squares | Cuts Rounds up to | Net Weight | Crated Weight |
|------|-------------------------|----------------------|-------------------|------------|---------------|
| 10   | Angle iron legs         | up to 1"             | 1 1/8"            | 294 lbs.   | 305 lbs.      |
| 10-A | Wheels attached to legs | up to 1"             | 1 1/8"            | 319 lbs.   | 319 lbs.      |
| 10-B | Without Legs            | up to 1"             | 1 1/8"            | 265 lbs.   | 265 lbs.      |
| 11   | Angle iron legs         | up to 1 1/4"         | 1 3/8"            | 478 lbs.   | 498 lbs.      |
| 11-A | Wheels attached to legs | up to 1 1/4"         | 1 3/8"            | 503 lbs.   | 503 lbs.      |
| 11-B | Without legs            | up to 1 1/4"         | 1 3/8"            | 439 lbs.   | 439 lbs.      |

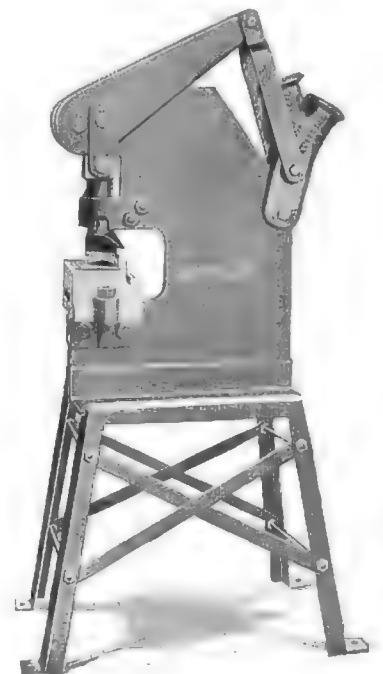
Can be mounted on wheels or furnished without legs for bench use.

## Buffalo "Armor-Plate" Coping Machine

This machine was purposely designed for coping. It is well built with "Armor-Plate" steel frame, angle iron base welded to the frame plate and mounted on an angle iron stand. The steel lever and links, crucible steel punch, dies and coping tools will stand up under the most severe service.

The coping tools, used for notching angles, are interchangeable with punching tools of a capacity up to 1/2-inch hole in 1/2-inch stock. Regularly equipped for coping only. Punching attachment supplied at a small extra cost.

Capacity: Notches up to 90°; in angles up to 2 1/2 x 2 1/2 x 1 1/4"; depth of throat, 5 1/4"; net weight, 250 lbs.; crated weight, 260 lbs.



All parts subject to strain and wear are of high strength rolled steel.

*Buffalo*

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## Buffalo "Armor-Plate" Universal Iron Workers

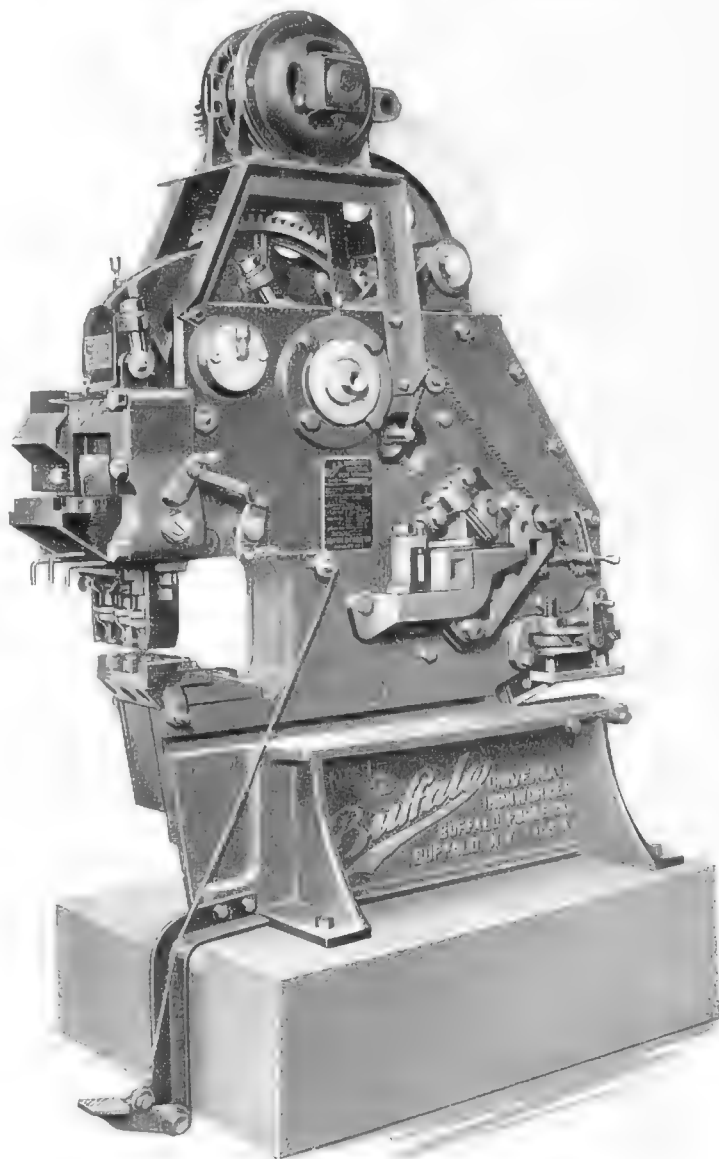
If your work involves the cutting of rounds, squares, angles, tees, beams or channels—punching holes in flats, plates, or structural shapes or shearing flats or slitting plates, you will find in the Buffalo Universal Iron Worker a very profitable investment. This machine not only combines several machines in one; punch, barcutter and shear, but it requires no special tools and saves an appreciable amount of set-up time. The frame is made of the well known "Armor-Plate" steel, which has a life guarantee against breakage.

A diagonal plunger enables mitering on a horizontal plane. The eccentric is high carbon steel forging, the flywheel shaft and pinion are nickel steel, with steel gear. Flywheel is keyed to the pinion. The two shear blades have four cutting edges each, and are interchangeable. With only one extra blade you are always ready for an emergency.

Five piece barcutter knives make sharpening and replacement easy and inexpensive. Besides the regular knives, we can furnish special barcutter knives. Gibs are provided in both plungers for taking up wear. Oiling and greasing have been simplified. One of the outstanding features of this machine is that no tools are required for adjusting strippers. Triple punching attachment can be furnished with this machine.

Buffalo Universal Iron Workers are made in three sizes for either pulley or motor drive. Let us know the kind of work you do and we'll show you how much one of these all around machines can save for you.

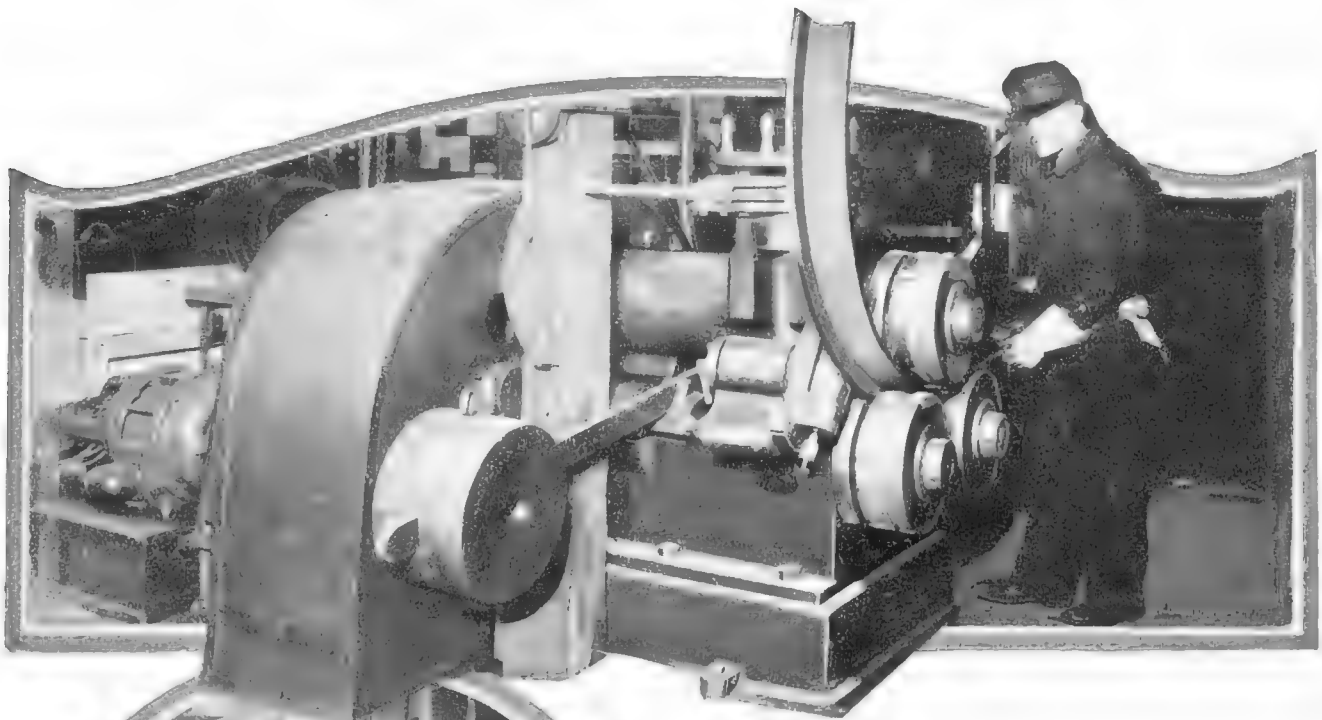
Complete information on these and other Buffalo power punches, shears and bar cutters is contained in our Punch and Shear Catalog, which will be sent to you on request.



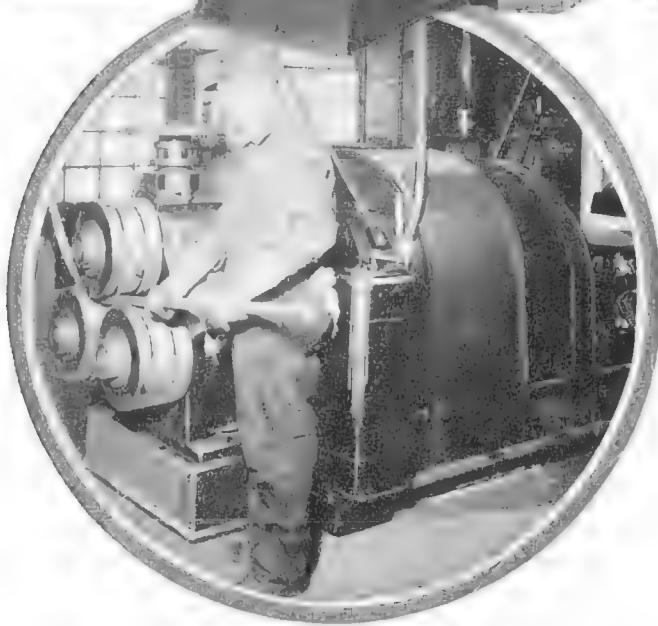
"Buffalo" No.  $\frac{1}{2}$  Universal Iron Worker completely equipped with motor and notcher.

***"Buffalo"***





The material being handled in this Buffalo Vertical Bending Roll is 4" x 5" structural steel angle,  $\frac{1}{2}$ " thick and 12' 5" long.

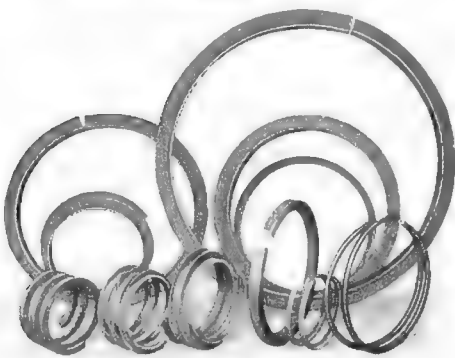


## Buffalo Bending Rolls

Hundreds of satisfied owners are unanimous in declaring "Buffalo" Bending Rolls, both horizontal and vertical types, unparalleled for the bending of flats, squares, angles, tees, channels, beams, copper tubes and steel tubes into arcs, circles or spirals. No heating is necessary. Adjustable and interchangeable rolls make one machine meet an unusually wide range of requirements. Combination rolls can be furnished to handle several sizes of flats on edge, rounds or tubes. Special rolls can be built for odd shapes. Made in a variety of sizes.

The horizontal type is suggested for shops where circles of large diameter are bent, as the work is done in a horizontal plane and easier to handle. They will stand up under continuous, hard service.

Regardless of what your product may be, if it involves bending of any kind, we will gladly specify the type, size and style Buffalo Bending Roll that will save you time, money and material.

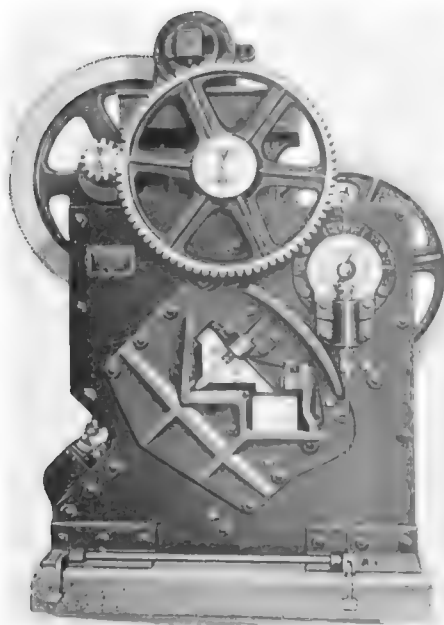


Samples of work done on a Buffalo Bending Roll.

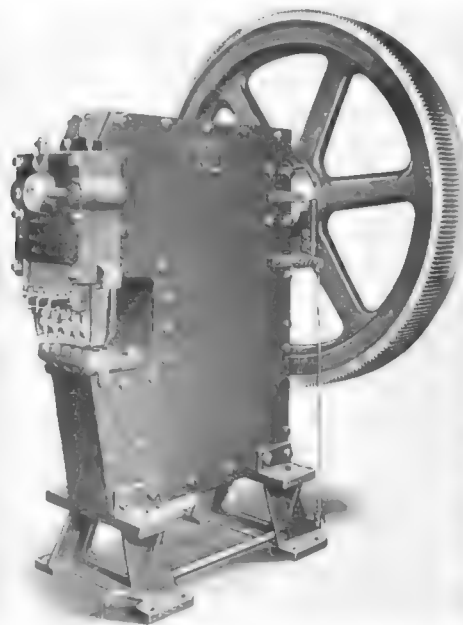
*Buffalo*

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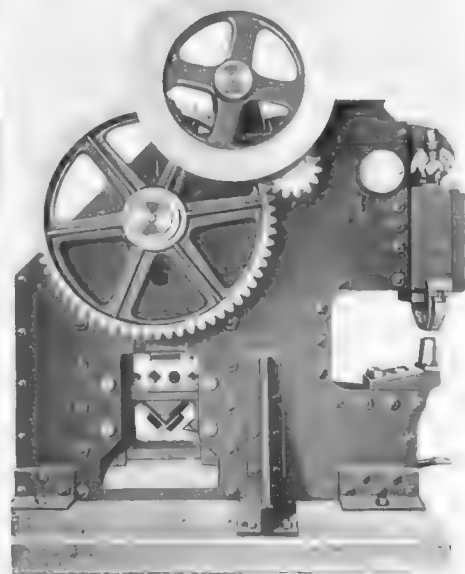
## Other Buffalo Metal Working Machines



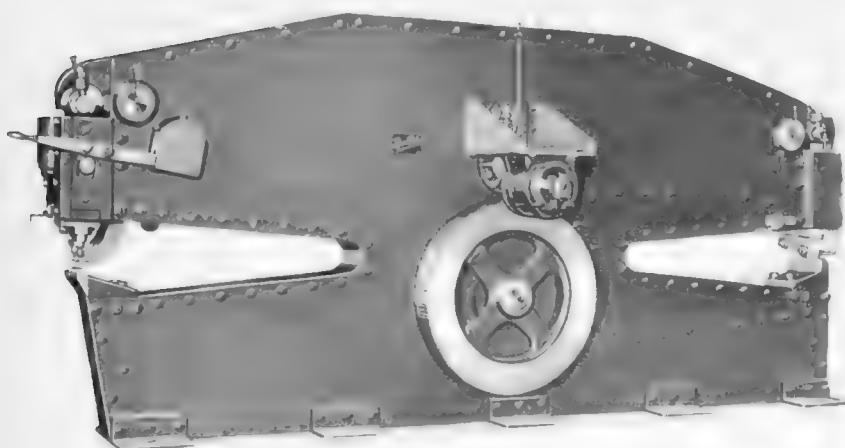
Angle Shear and Punch.



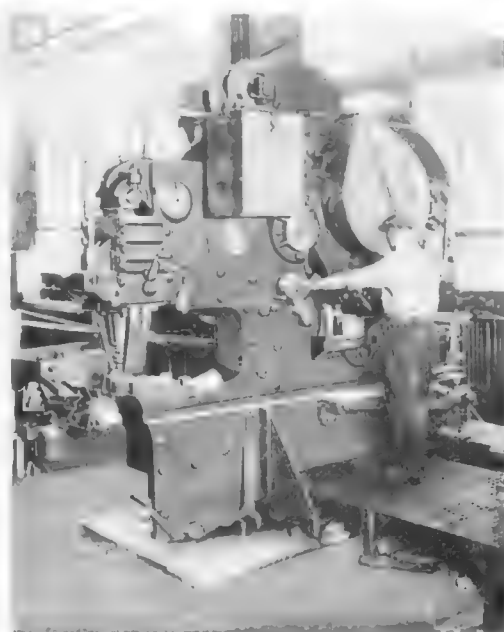
No. 45 Rapid Acting Punch  
with multiple head.



No. 50 Punch and Barcutter.



No. 48 x 60 Punch and Shear with motor drive.



No. 3 1/2 U.D. Machine.

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*Buffalo*

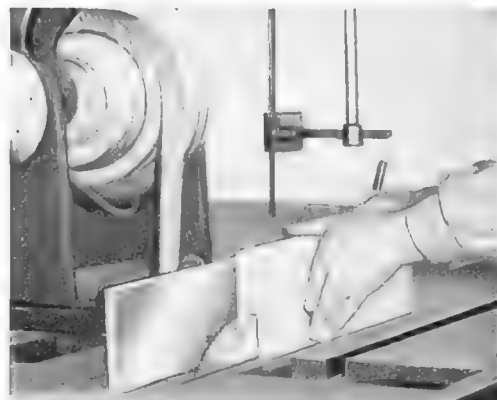
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## *Buffalo Combination Woodworking Machines*

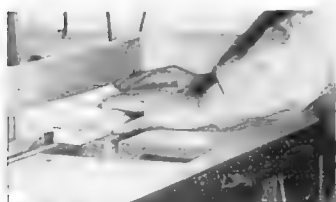
**T**HE Buffalo No. 1 and No. 2 Combination Woodworking Machines shown in this section have been on the market for many years. They are sturdily built throughout and recent improvements in both design and construction have added to their popularity. Years of hard usage have demonstrated their ability to stand up under continuous hard service.



Resawing With Band Saw



Mortising With Circular Saw

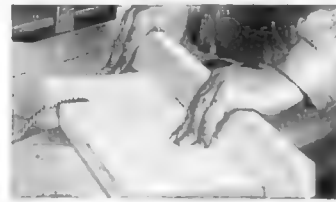


Mortising

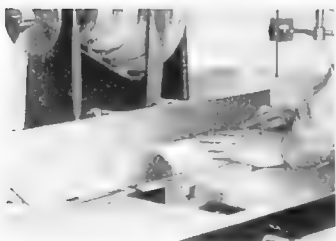
## *“Buffalo”*

### No. 1 Woodworker

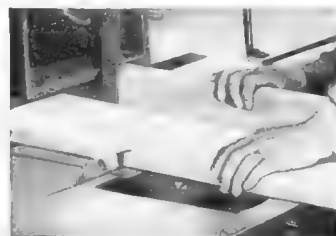
Three men can work on this efficient machine at one time without interfering with one another. Practically any woodworking operation can be performed upon it without any attachment except the changing of tools. It will keep them busy all day at about one-third the cost of special machines. Because of its sturdy efficient construction it occupies very little space, thereby saving valuable floor space for other uses.



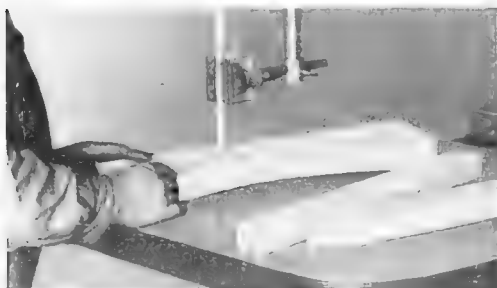
Cross-Cutting at Angle With Circular Saw



Ripping Bevel With Circular Saw



Cross-Cutting With Circular Saw



Note Sturdy Construction of Adjustable Guide on Band Saw

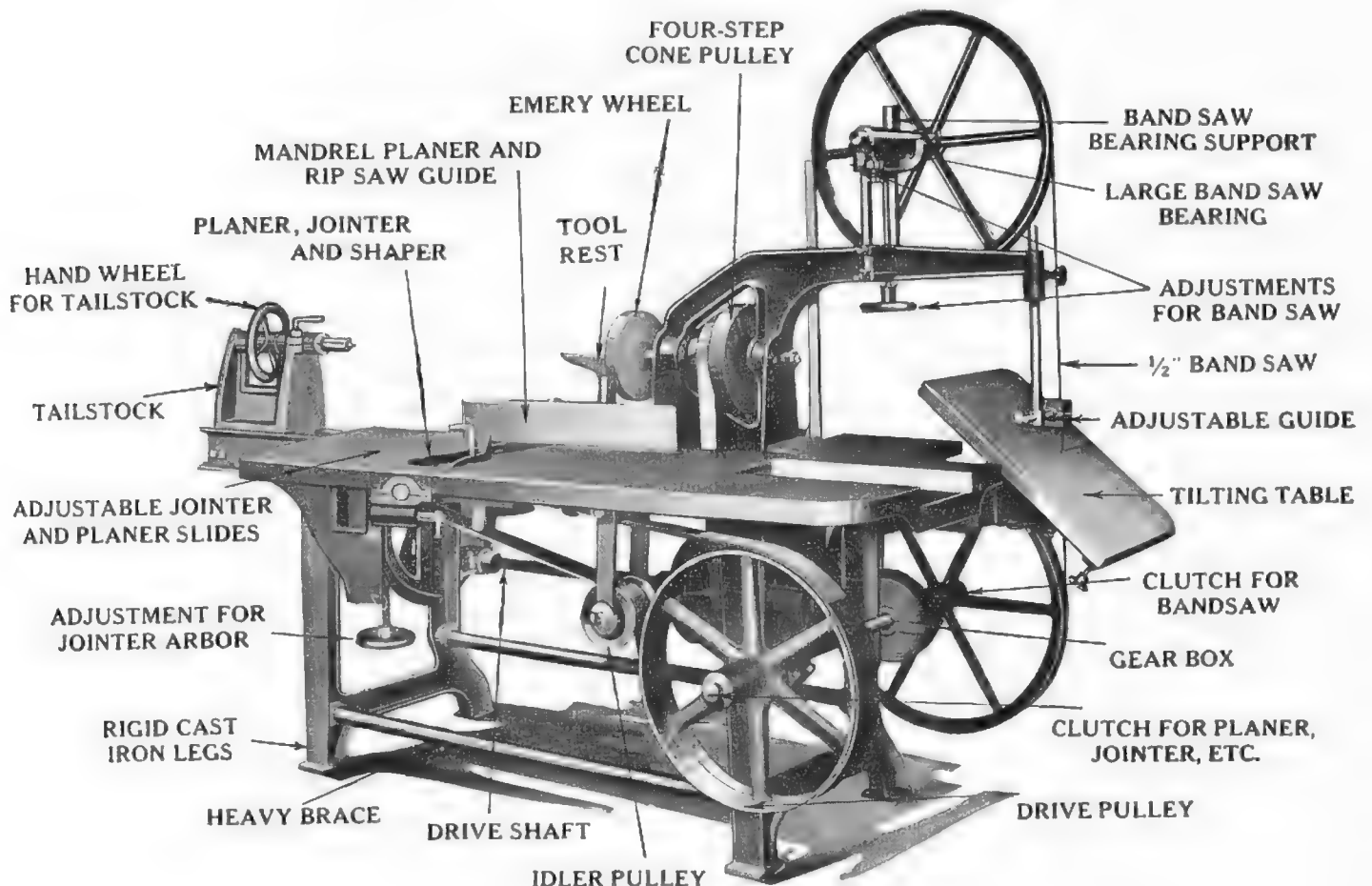


Note Convenience of Adjustable Guide

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# The Complete Buffalo Woodworker No. 1

TEN MACHINES IN ONE



This No. 1 Combination Woodworking machine, as illustrated, is a great favorite in shops where a large woodworker is needed. It has both a rip and cross-cut saw, band saw, jointer, shaper or edge moulder, drill and grinder. A sander can be furnished at slight additional charge.

The rip and cross-cut saws are 12" in diameter and will make a cut up to 3½" deep. Drive shaft 350 R.P.M. Standard equipment includes lathe, 22" swing, 42" between center, 10" planer head, band saw, rip, cut-off saw, belts and necessary guide.

In construction, the No. 1 Woodworker is a husky, well made machine, that will stand the severe service to which such machines are subjected.

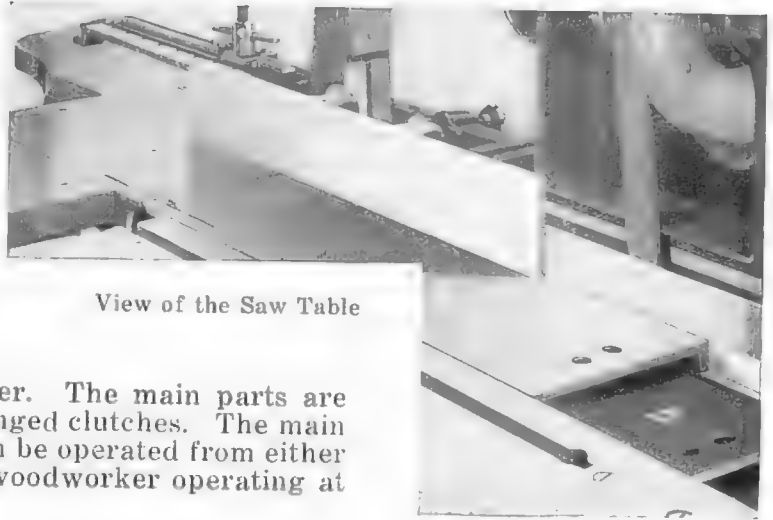
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*Buffalo*

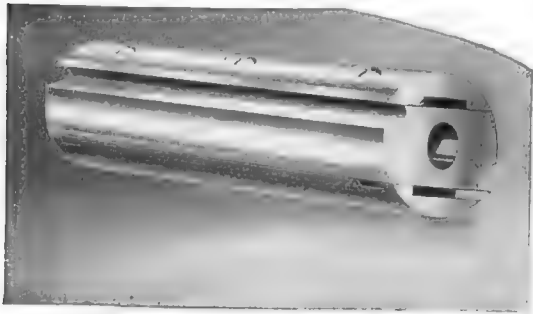
## Operation of Machine

Tight and loose pulleys are provided on the main shaft, at the left of the cone pulleys below the table. This construction makes it possible to run the belt up thru the table to a line shaft or motor overhead.

There are three distinct parts to the machine which may be operated individually or together. (1) The lathe, also used for drilling and grinding. (2) The band saw. (3) The arbor, used for circular saw, planer, sander, jointer and shaper. The main parts are engaged by means of three conveniently arranged clutches. The main drive is provided with a belt-shifter which can be operated from either side of the machine. With all parts of the woodworker operating at once, only 4 to 5 H. P. are required.



View of the Saw Table



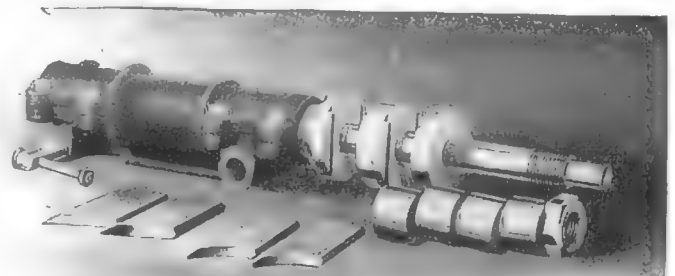
10-Inch Planer Head

**Planer, Jointer, Shaper and Saw Mandrel:** The No 1 Combination Woodworker has an adjustable mandrel which can be run horizontally or vertically and on which may be inserted planer and dado heads, and circular saws and knives of any size. The mandrel is cold-rolled steel, machined and pivoted so that it swings easily to a horizontal or vertical position. Runs in long babbitted bearings, which have adjusting screws and liners to take up wear. A crown pulley, three inches in diameter is driven from the large pulley below the table. Starting and stopping are controlled by a clutch on the large pulley.

**Planing and Joining:** The planer table is made in two parts which fit into the channel of the main table and are horizontally adjustable to give access to mandrel or to allow it to be set vertically for shaping. One part of the table may be set at a lower level when planing to obtain the desired depth of cut. An adjustable guide for the planer is furnished which can be set at a 90° angle with the table top or tilted back to allow planing at an angle.

A 10-inch planer head with knives is furnished with the machine. The planer slides are 29x10 inches and 21x10 inches respectively.

**Shaper:** With the mandrel raised to a vertical position a shaper is obtained on which any kind of knives may be used. We furnish one pair of chamfering bits and one pair of rounding bits as the 10-inch planer head can only be used in the horizontal position. When sizing lumber, the gauge is set at the desired distance from the edge of the knives, and the lumber run thru between.



Mandrel for Jointer, Shaper and Circular Saw

*Buffalo*



By dropping the spindle partly below the level of the table, panels of various widths can be raised. The shaper will take knives for working mouldings of any shape, for dadoing, tonguing, grooving, rabbetting, pole-rounding, etc. For use with the shaper we furnish an attachment to the main gauge which enables the operator to stand at the side of the table and run the work past the knives, at the front, instead of between the knives and the main gauge. This extension gauge is furnished only when ordered at a small extra charge.



The grinder is  
a useful accessory

**Rip and Cut-Off Saw:** Twelve-inch rip and cut-off saws are furnished with the machine. Cuts of any desired depth up to  $3\frac{1}{2}$  inches may be made. The gauge provided may be used as a ripping fence. By shimming up the work, it is possible to saw on a bevel.

The removable gauge for cross-cutting has quadrant which permits adjustment for sawing at any angle from  $30^{\circ}$  to  $90^{\circ}$ .

**The Lathe:** The lathe, for wood turning, will handle work up to 20 inches in diameter by 40 inches long and has four step cone pulley  $5\frac{1}{4}$ "- $7\frac{1}{2}$ "- $9\frac{3}{4}$ " and 12" in diameter within 2-inch pulley face, thus giving a variety of speeds.

A clutch is provided on lower cone pulley for controlling stopping and starting. Regular equipment includes a tool rest which slides along the table and acts as guide while using lathe, one spare center and one face plate for holding work in lathe.

**Drill:** A chuck is furnished with each machine which fits on end of lathe spindle and will take standard  $\frac{1}{2}$ " straight shank drill bits.

Either a disc sander or an emery wheel can easily be fastened to the lathe spindle making very useful accessories. Grinding wheel is furnished with machine. Disc sander can also be furnished at an extra charge.

**The Band Saw:** The band saw is cast in one piece with the main table, and is planed true and level. It measures  $29\frac{1}{2}$  x 30 inches. The saw wheels are 27 inches in diameter and the maximum clearance below the guide is 15 inches. The saw is furnished with an anti-friction adjustable guide which can be removed entirely if desired. One  $\frac{1}{2}$ -inch band saw is furnished with the machine, altho other size saws can be used.

A clutch on the lower saw wheel provides a convenient means of starting and stopping. The band saw is as strongly constructed as it would be in an individual machine; the shaft is  $1\frac{3}{8}$  inches diameter; the upper bearing is 10 inches long.

#### Specifications

Buffalo No. 1 Complete Woodworker with iron table, accurately planed mandrel, and 10-inch planer head and knives.

Greatest dimensions of table, 8'-7" long x 4'-7" wide.

Height of table, 36 inches.

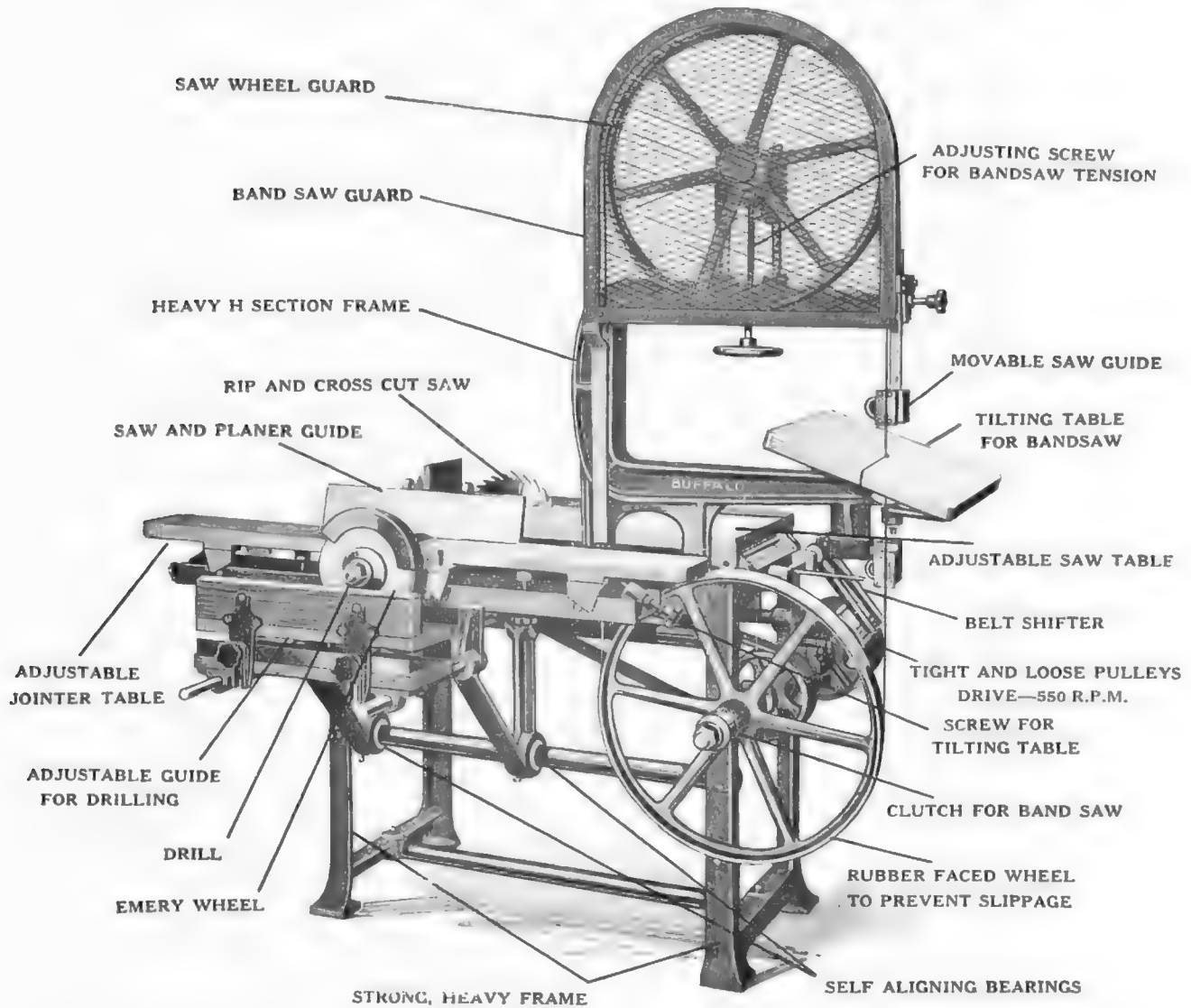
Greatest over-all length of machine, with carriage pulled out, 12 feet.

Shipping weight, 2,000 lbs.

Drive pulley should run 350 R.P.M.

*“Buffalo”*

## The Combination Buffalo Woodworker No. 2



The entire construction of the Buffalo No. 2 Combination Woodworker, is of the highest grade. The frame proper is made of heavy cast iron and rigidly braced. Bearings throughout are large, and babbitted, with provision for lubricating. Tables are finished perfectly smooth. Band saw wheels are balanced, so as to run safely at high speeds without vibration. Band saw wheel bearings are extra long, and the upper bearing is adjustable by means of the hand wheel shown.

This combination woodworker is adaptable to many different jobs. Contractors find it convenient to take from place to place, or to set up in their shops. Carpenters have found it cuts the labor costs on new buildings to a fraction. In foundries, it is used for making and repairing flasks, core boxes and patterns, as well as for many other jobs, bracing, making bins, etc. Three men can perform different operations at one time without interfering with each other.

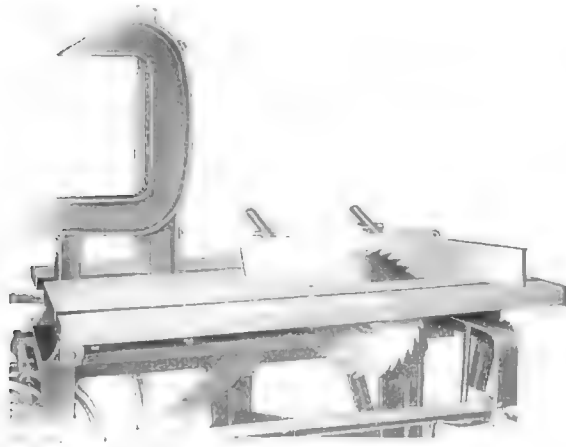
Many shipping rooms find this machine excellent for cutting crating lumber. Blacksmiths and wagon-makers also find the No. 2 Woodworker a very useful machine.

*"Buffalo"*

### Rip and Crosscut Saw:

The table for the rip and crosscut saw is 37 inches wide, of heavily ribbed cast iron. The saw mandrel is  $1\frac{1}{16}$  inches diameter and runs in babbitted and reamed bearings  $4\frac{3}{4}$  inches long and provided with oil grooves. The saw pulley is  $2\frac{3}{4}$  inches diameter, a  $2\frac{1}{2}$ -inch belt is used, with a speed of 3000 R.P.M. Belt from drive shaft to saw mandrel furnished with machine.

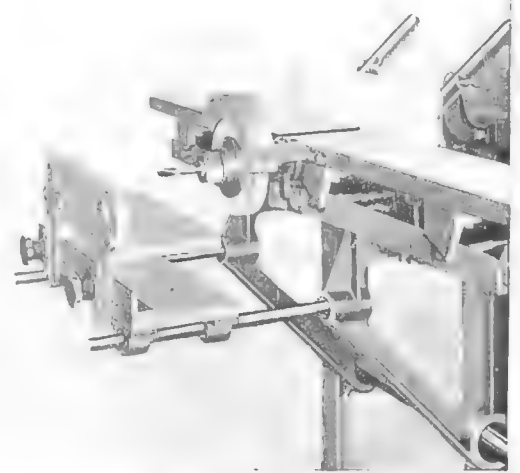
The saw table is hinged at one end for raising and lowering to adjust the depth of the cut. (See illustration.) The cast iron side guide, which will tilt to any angle, may be swung over and used in con-



Rip and Cross-Cut Saw—Table tilted. Note smooth even finish and sturdy construction.

A screw and handwheel arrangement are used to make both sides of the jointer table adjustable.

These tables are 6 inches wide and 24 inches long, each allowing for very accurate work. The jointer shaft has an outboard bearing and outside of this an  $8 \times \frac{3}{4}$  inch emery wheel may be attached by means of two collars and a nut.

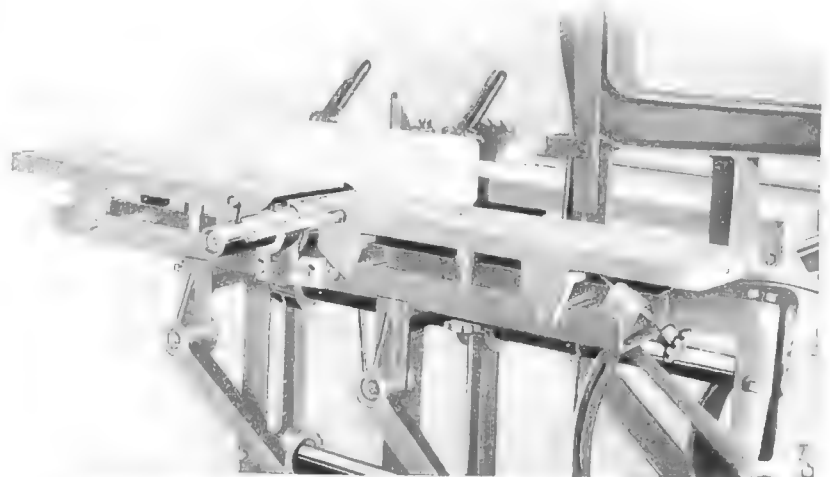


Grinder wheel and drill with grinder guard and drilling table. Observe the adjustable feature of the drilling table.

nection with the jointer. A cast iron cross-cut guide is also furnished which slides in a milled groove in the table and is adjustable for different angles. The saw will make a cut  $2\frac{3}{4}$  inches deep.

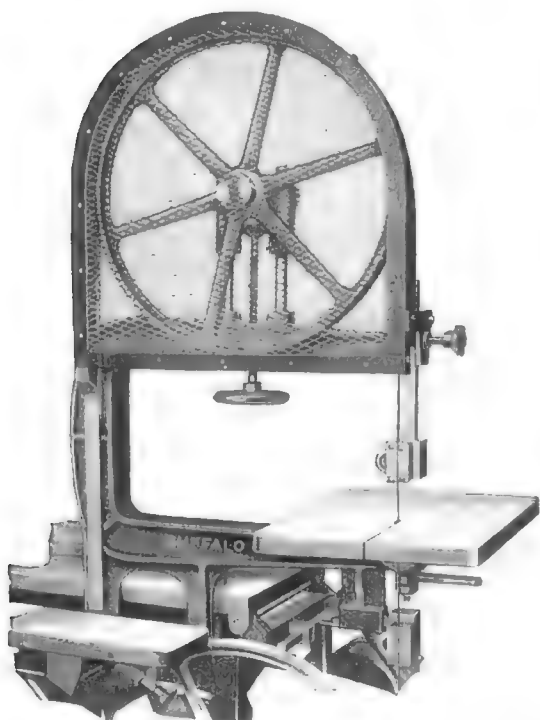
### Jointer:

The jointer is fastened on the same spindle as the saw, is 6 inches long and 3 inches in diameter. Our jointer is, of course, of the rounded safety type.



Close-up of the jointer, showing the adjustable tables. At the left front of the machine you will notice the brackets for holding the slide table for drilling.

*“Buffalo”*



Close-up of the band saw. The heavy frame, balanced wheels, adjustable bearing and rigid, sturdy guide enable this saw to stand a lot of hard usage.

saw frame, and a hand wheel screw is provided under the bearing for maintaining a tension on the saw.

The saw guide consists of a tempered and ground tool steel disc with an extension which runs in a long reamed hole. The guide is readily adjustable for material up to several inches thick. A  $\frac{3}{8}$ -inch band saw is regular equipment but wider or narrower ones can be used if the nature of the work requires it.

The following are furnished as regular equipment:

- A  $\frac{3}{8}$ -inch band saw.
- 10-inch rip saw.
- 8x $\frac{3}{4}$ -inch emery wheel.
- 6x3-inch safety planer head.
- Wrench for planer head.
- Belt for rip saw and planer.
- Band saw guide.
- Emery wheel guard.

The saw throat is 21 $\frac{1}{2}$  inches.  
2 H.P. required to operate.  
Shipping Weight, 830 lbs.

### Drill and Sander:

The shaft end is provided with a  $\frac{1}{2}$ -inch reamed hole and tap for a headless set screw. This allows straight shank bits to be inserted. In order to facilitate holding work to be drilled, a slide table is provided which is readily adjustable to different heights. The guide bars for this table fit in reamed holes in the bracket of the machine. Thus the guide can easily be removed when not in use.

An 18-inch disc sander may be placed on the threaded drive shaft end if desired.

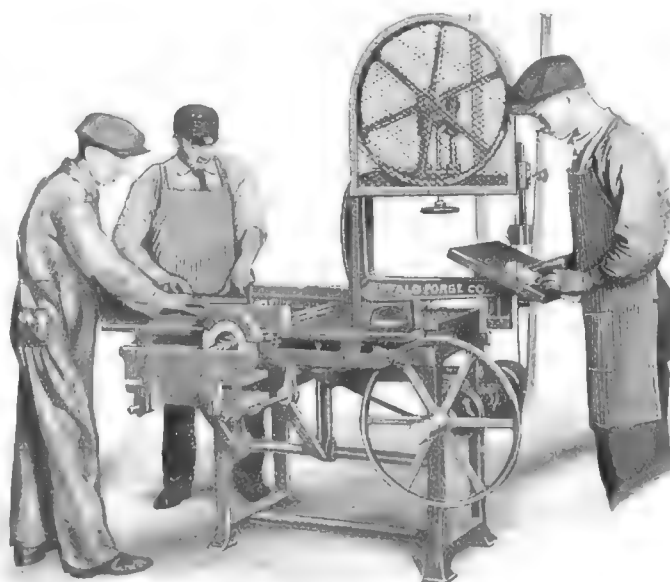
### Band Saw:

The band saw on this machine is furnished with a well-finished cast iron tilting table 17 $\frac{1}{2}$  inches long by 14 $\frac{1}{4}$  inches wide. Absolute rigidity of the table is assured, as there are three ribs running the full length of it. It may be locked in any position by means of a positive-action cam and handle.

The band saw wheels are turned and balanced, 22 inches in diameter with a 1 $\frac{1}{2}$ -inch face. The face of each wheel is covered with an endless rubber band on which the saw runs. This eliminates slippage of the saw, and reduces the heat from the blade.

### Saw Frame:

The frame of the saw is made of cast iron in an H section, which is the strongest construction known. The saw throat is 21 $\frac{1}{2}$  inches deep. An adjustable bearing for the upper wheel is mounted on top of this



These men are busily engaged operating band saw, rip saw and jointer, a common sight in shops where our woodworking machines are used.

*“Buffalo”*

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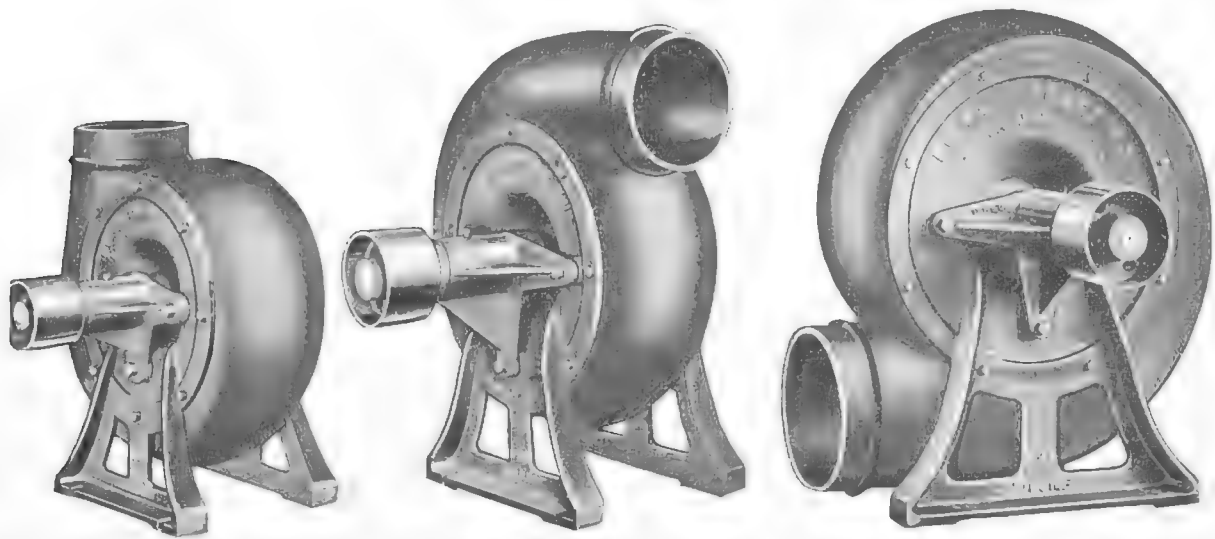
## *Buffalo Blowers and Exhausters*

**I**N this section we show Buffalo blowers and exhaust fans, which are largely stock machines, ready for immediate shipment. They are designed for economy in power, lasting service, and for the greatest convenience in care, operation and repair. In all cases special attention is given to the balancing of the blast wheels, so that vibration may be avoided; each blower is given a running balance before shipment. The pulleys furnished are of standard sizes with correct proportions for the speed and horsepower needed.

For engineering data not contained in this section we ask that you refer to our engineering department.

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## Buffalo Volume Fans



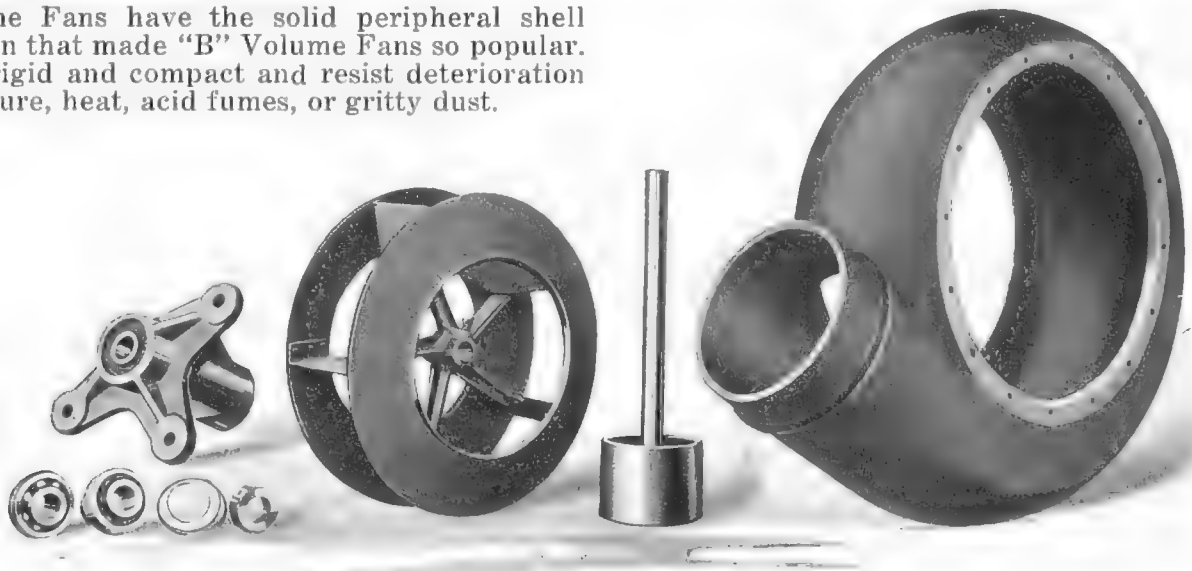
Three of the eight positions to which the housing of Buffalo Volume Fans can be adjusted. Change is made by simply unbolting the side plates and swinging the housing to the desired position. See Page sixty-one for other arrangements.

Buffalo Volume Fans are a new development from the "B" Volume Blowers and Exhausters which have been popular for so many years. The Volume Fans are equipped with ball bearings, giving better efficiencies, and are adjustable to eight different positions of discharge and to either clockwise or counter clockwise rotation. The one fan can be used as either a blower or exhauster.

Side plates and feet are cast in one piece to permit adjusting the housing to any desired direction of discharge.

Heavy duty, dust-proof ball bearings with deep raceways in both inner and outer rings, insure efficient, trouble-free running.

Volume Fans have the solid peripheral shell construction that made "B" Volume Fans so popular. They are rigid and compact and resist deterioration from moisture, heat, acid fumes, or gritty dust.

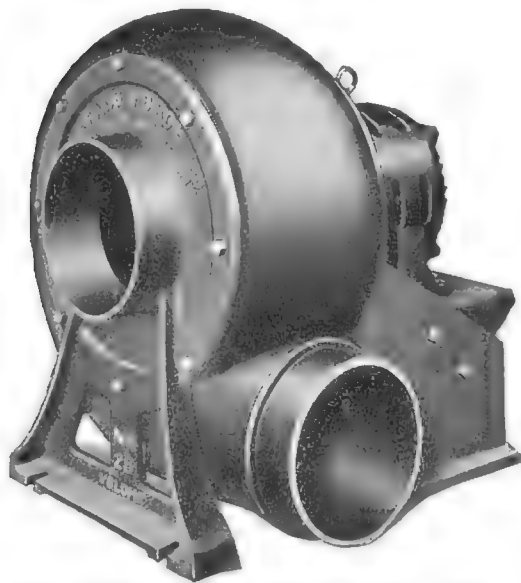


Note the simplified plan of assembly. The steel wheel blades are securely riveted to the malleable iron spider and to the steel side plates. Shaft carried by heavy duty ball bearings.

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*Buffalo*

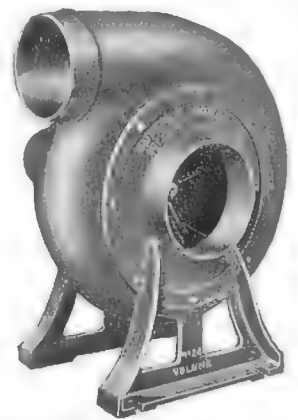




No. 23 Volume Fan, direct motor drive.

## Buffalo Volume Fans with Direct Motor Drive

The arrangement for motor drive is an attractive feature of the new design of Buffalo Volume Fans. A special center plate casting with an adjustable support is used to mount the direct connected motor, replacing the bearing arm. This eliminates the need of a cast iron sole plate, saving size and weight and still retaining the reversible housing feature.



No. 24 Volume Fan, showing inlet side.

### A Few of the Uses for which Buffalo Volume Fans Are Especially Adapted:

Burning Sawdust, Conveying Material, Drying Systems, Emery and Polishing Wheels, Exhausting Smoke, Forced Draft, Forge and Furnace Blast, Fume Exhaust, Hollow Blast Grates, Mine Ventilation, Organ Blowing, Shavings Exhaust Systems, Toilet Ventilation, Vapor Removal.

**The one fan can be used for either blowing or exhausting.**

### Capacities, Speeds and Horsepower of Volume Fans

| Fan No. | 1" S.P.<br>.58 oz. |        |      | 2" S.P.<br>1.16 oz. |        |      | 3" S.P.<br>1.73 oz. |        |      | 4" S.P.<br>2.31 oz. |        |       | 5" S.P.<br>2.89 oz. |        |       |
|---------|--------------------|--------|------|---------------------|--------|------|---------------------|--------|------|---------------------|--------|-------|---------------------|--------|-------|
|         | A.P.M.             | R.P.M. | H.P. | A.P.M.              | R.P.M. | H.P. | A.P.M.              | R.P.M. | H.P. | A.P.M.              | R.P.M. | H.P.  | A.P.M.              | R.P.M. | H.P.  |
| 21      | 179                | 1765   | .05  | 253                 | 2498   | .13  | 310                 | 3063   | .24  | 358                 | 3533   | .36   | 400                 | 3925   | .51   |
| 22      | 279                | 1413   | .07  | 395                 | 1998   | .20  | 485                 | 2470   | .37  | 560                 | 2825   | .57   | 625                 | 3160   | .80   |
| 23      | 472                | 1087   | .12  | 669                 | 1538   | .34  | 821                 | 1885   | .63  | 946                 | 2173   | .96   | 1059                | 2431   | 1.35  |
| 24      | 650                | 927    | .17  | 921                 | 1311   | .47  | 1130                | 1610   | .87  | 1303                | 1855   | 1.32  | 1458                | 2073   | 1.86  |
| 25      | 906                | 785    | .23  | 1283                | 1110   | .65  | 1575                | 1361   | 1.21 | 1817                | 1570   | 1.84  | 2030                | 1756   | 2.59  |
| 26      | 1320               | 649    | .34  | 1870                | 917    | .95  | 2293                | 1126   | 1.76 | 2640                | 1299   | 2.68  | 2960                | 1451   | 3.78  |
| 27      | 2235               | 500    | .57  | 3160                | 706    | 1.60 | 3880                | 866    | 2.98 | 4475                | 1000   | 4.54  | 5000                | 1118   | 6.39  |
| 28      | 3723               | 387    | .95  | 5274                | 547    | 2.67 | 6475                | 671    | 4.97 | 7460                | 775    | 7.56  | 8350                | 865    | 10.65 |
| 29      | 6310               | 298    | 1.60 | 8940                | 421    | 4.53 | 10980               | 516    | 8.43 | 12660               | 595    | 12.81 | 14150               | 665    | 18.05 |

| Fan No. | 6" S.P.<br>3.47 oz. |        |       | 7" S.P.<br>4.05 oz. |        |       | 8" S.P.<br>4.62 oz. |        |       | 9" S.P.<br>5.19 oz. |        |       | 10" S.P.<br>5.77 oz. |        |       |
|---------|---------------------|--------|-------|---------------------|--------|-------|---------------------|--------|-------|---------------------|--------|-------|----------------------|--------|-------|
|         | A.P.M.              | R.P.M. | H.P.  | A.P.M.              | R.P.M. | H.P.  | A.P.M.              | R.P.M. | H.P.  | A.P.M.              | R.P.M. | H.P.  | A.P.M.               | R.P.M. | H.P.  |
| 22      | 685                 | 3463   | 1.02  | 740                 | 3740   | 1.30  | 791                 | 3997   | 1.61  | 842                 | 4054   | 1.92  | 893                  | 4111   | 2.23  |
| 23      | 1160                | 2665   | 1.73  | 1252                | 2874   | 2.22  | 1340                | 3074   | 2.72  | 1418                | 3258   | 3.24  | 1496                 | 3435   | 3.80  |
| 24      | 1598                | 2273   | 2.38  | 1722                | 2452   | 3.06  | 1842                | 2623   | 3.74  | 1952                | 2780   | 4.46  | 2060                 | 2930   | 5.22  |
| 25      | 2225                | 1924   | 3.31  | 2400                | 2075   | 4.26  | 2567                | 2220   | 5.21  | 2720                | 2352   | 6.21  | 2868                 | 2480   | 7.28  |
| 26      | 3240                | 1590   | 4.82  | 3492                | 1716   | 6.20  | 3740                | 1835   | 7.60  | 3960                | 1945   | 9.05  | 4175                 | 2050   | 10.60 |
| 27      | 5490                | 1224   | 8.15  | 5910                | 1321   | 10.50 | 6320                | 1413   | 12.85 | 6700                | 1499   | 15.31 | 7060                 | 1580   | 17.95 |
| 28      | 9150                | 950    | 13.60 | 9860                | 1023   | 17.52 | 10550               | 1090   | 21.40 | 11180               | 1160   | 25.50 | 11800                | 1223   | 29.90 |
| 29      | 15500               | 730    | 23.10 | 16720               | 786    | 29.70 | 17900               | 841    | 36.30 | 18950               | 890    | 43.30 | 20000                | 940    | 50.75 |

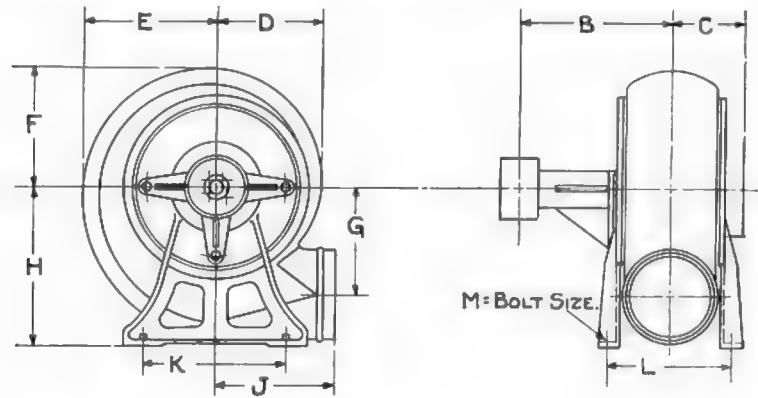
S.P. is static pressure.

A.P.M. is cu. ft. of air per minute.

H.P. is power required to deliver air at pressure given.

*Buffalo*

## Specifications for Buffalo Volume Fans



| Dimensions in Inches |        |        |        |        |        |        |        |        |        |        |
|----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| No.                  | B      | C      | D      | E      | F      | G      | H      | J      | K      | L      |
| 21                   | 9 1/8  | 4      | 5 7/8  | 6 3/8  | 5 7/8  | 5 1/8  | 8      | 6 1/8  | 6 1/2  | 7      |
| 22                   | 11 1/8 | 5 1/4  | 6 3/8  | 8 3/8  | 7 3/8  | 6 1/8  | 10     | 7 3/8  | 7      | 8 3/4  |
| 23                   | 11 1/8 | 6 1/8  | 8 1/2  | 10 1/8 | 9 3/8  | 8 1/8  | 12 3/8 | 10     | 10 1/2 | 10 3/4 |
| 24                   | 14 1/4 | 6 1/8  | 9 3/8  | 12 3/8 | 11 3/8 | 10 1/8 | 15     | 11 1/4 | 13     | 12     |
| 25                   | 14 1/4 | 7 5/8  | 11 5/8 | 14 5/8 | 13 3/8 | 11 7/8 | 17 3/8 | 12 1/2 | 16     | 13 1/4 |
| 26                   | 19 1/4 | 9 3/4  | 14 1/8 | 17 3/8 | 15 3/8 | 14 1/8 | 21     | 15 1/4 | 19 1/2 | 18     |
| 27                   | 19 1/4 | 11 5/8 | 18 1/8 | 22 1/8 | 20 3/8 | 18 1/8 | 27     | 19 1/2 | 26     | 23     |
| *28                  |        | 15     | 23 3/8 | 29 3/8 | 26 3/4 | 23 3/8 |        | 28     |        |        |
| †29                  |        | 18 3/8 | 30 1/8 | 38 1/8 | 34 1/8 | 30 3/8 |        | 35 1/2 |        |        |

\*Fan No. 28 has ball bearing arm but is not reversible.

†Fan No. 29 has bearings on pedestals and is not reversible.

Nine sizes cover a wide range of requirements. Increase from one size to another is uniform so that the capacities, speeds and pressures and power ratings of the different sizes bear a definite relation to each other.

| Dimensions in Inches |                            |                           |          |       |                  |
|----------------------|----------------------------|---------------------------|----------|-------|------------------|
| No.                  | Outlet Diameter<br>Outside | Inlet Diameter<br>Outside | Pulleys  |       | Weight<br>Pounds |
|                      |                            |                           | Diameter | Face  |                  |
| 21                   | 4 1/2                      | 5                         | 3        | 2 1/2 | 65               |
| 22                   | 5 1/2                      | 6                         | 4        | 3     | 110              |
| 23                   | 7 1/2                      | 8                         | 4        | 3     | 165              |
| 24                   | 8 1/2                      | 9 1/8                     | 5 3/4    | 3 5/8 | 250              |
| 25                   | 10                         | 10 1/2                    | 5 3/4    | 3 5/8 | 350              |
| 26                   | 12                         | 12 3/4                    | 7 1/2    | 6 1/2 | 500              |
| 27                   | 16                         | 16 3/4                    | 7 1/2    | 6 1/2 | 880              |
| 28                   | 20                         | 20 7/8                    | 9 1/2    | 8 1/4 | 1900             |
| 29                   | 26 1/2                     | 26 3/4                    |          |       | 4500             |

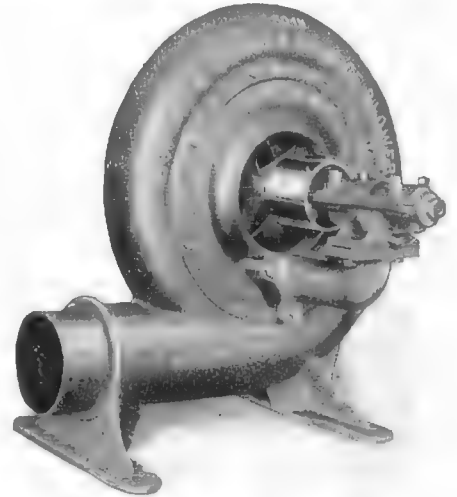
***"Buffalo"***

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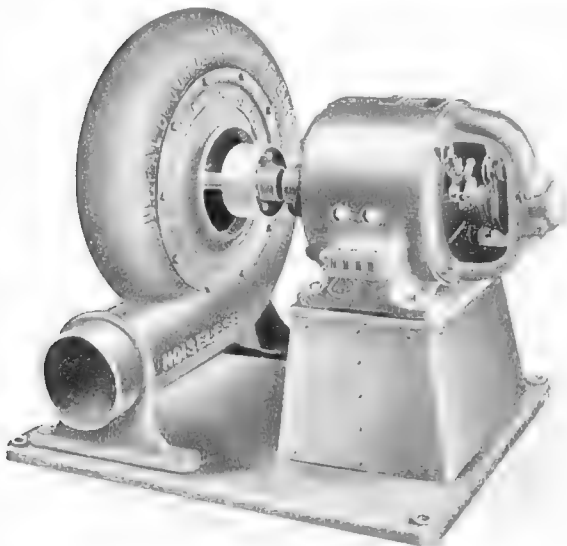
## Buffalo Steel Pressure Blowers

Made in twelve sizes, with a wide range of capacities, the smaller steel pressure blowers are used extensively for supplying air to cupolas and forge fires and also for burning pulverized coal or fuel oil. Other uses include mould-cooling in gas plants and supplying air to malleable iron furnaces. The smaller fans are capable of delivering air at pressures up to 6 to 8 ounces, while the larger ones are capable of delivering against pressures up to a maximum of 16 ounces.

Buffalo steel pressure blowers have a heavy cast iron shell, of solid peripheral construction, with easily removable center plates, permitting the blast wheel to be read-



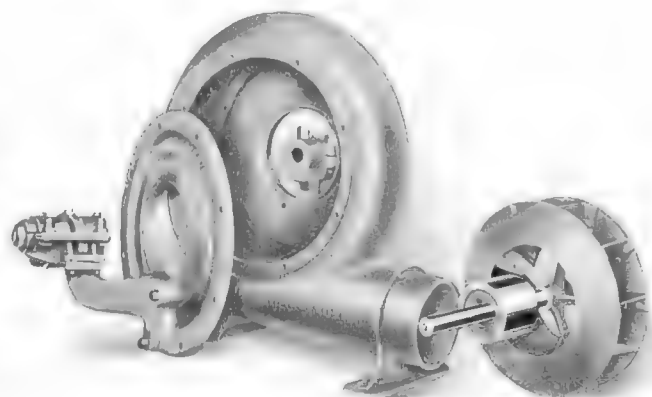
Steel Pressure Blower—Pulley Driven



Motor Driven Steel Pressure Blower (Type P)

sily removed or inspected without disturbing the blower on its foundations. This is one of the distinguishing features of Buffalo steel pressure blowers.

All fans up to and including the No. 6 are equipped with one pulley. The larger sizes have two pulleys, one on each side of the shell. All standard blowers have bottom horizontal discharge. The blowers having one pulley have the pulley located on the right hand side of the shell when standing facing the discharge, and are designated as clockwise bottom horizontal discharge. As the larger sizes have two pulleys, it is only necessary to designate the discharge when ordering. Either clockwise or counter-clockwise can be furnished at the regular price, but all discharges other than bottom horizontal are special, usually having to be made up, and there is an extra charge of 10% on account of special core boxes being required for casting, while the standard blowers are manufactured in large quantities.



Parts of Steel Pressure Blower

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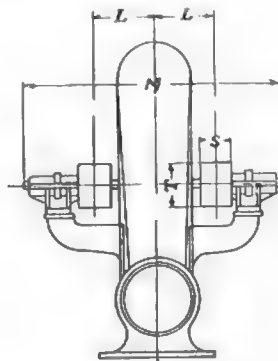
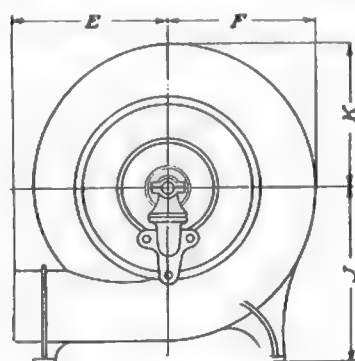
**“Buffalo”**

# Buffalo Steel Pressure Blowers

## Table of Capacities with Speed and Horse Power Requirements

| 3 Oz.         |        |      |      | 4 Oz.  |      |      |        | 5 Oz. |      |        |      | 6 Oz. |               |        |      | 7 Oz. |  |  |  |
|---------------|--------|------|------|--------|------|------|--------|-------|------|--------|------|-------|---------------|--------|------|-------|--|--|--|
| No. of Blower | R.P.M. | Cap. | H.P. | R.P.M. | Cap. | H.P. | R.P.M. | Cap.  | H.P. | R.P.M. | Cap. | H.P.  | No. of Blower | R.P.M. | Cap. | H.P.  |  |  |  |
| 2             | 4320   | 247  | 0.53 | 4990   | 285  | .81  | 5595   | 320   | 1.01 |        |      |       | 4             | 4395   | 785  | 3.05  |  |  |  |
| 3             | 3420   | 490  | 0.81 | 3950   | 565  | 1.25 | 4435   | 635   | 1.75 | 4840   | 690  | 2.3   | 5             | 3870   | 890  | 3.38  |  |  |  |
| 4             | 2880   | 520  | 0.86 | 3330   | 600  | 1.32 | 3730   | 670   | 1.85 | 4065   | 730  | 2.40  | 6             | 3360   | 1160 | 4.42  |  |  |  |
| 5             | 2540   | 580  | 0.96 | 2930   | 670  | 1.47 | 3290   | 755   | 2.06 | 3585   | 825  | 2.70  | 7             | 2985   | 1375 | 5.25  |  |  |  |
| 6             | 2190   | 755  | 1.24 | 2550   | 880  | 1.94 | 2860   | 985   | 2.70 | 3115   | 1076 | 3.52  | 8             | 2710   | 2080 | 7.93  |  |  |  |
| 7             | 1940   | 895  | 1.46 | 2255   | 1045 | 2.27 | 2535   | 1170  | 3.32 | 2765   | 1275 | 4.15  | 9             | 2425   | 2940 | 11.2  |  |  |  |
| 8             | 1763   | 1353 | 2.20 | 2050   | 1570 | 3.43 | 2300   | 1765  | 4.80 | 2510   | 1925 | 6.28  | 10            | 1815   | 4305 | 16.4  |  |  |  |
| 9             | 1577   | 1913 | 3.13 | 1840   | 2225 | 4.84 | 2060   | 2500  | 6.80 | 2245   | 2720 | 8.87  | 11            | 1510   | 5300 | 20.3  |  |  |  |
| 10            | 1180   | 2797 | 4.56 | 1375   | 3255 | 7.09 | 1540   | 3655  | 9.93 | 1680   | 3990 | 13.0  | 11 ½          | 1200   | 5940 | 23.4  |  |  |  |
| 11            | 985    | 3450 | 5.63 | 1145   | 4010 | 8.74 | 1285   | 4515  | 12.3 | 1400   | 4915 | 16.1  | 12            | 1230   | 6880 | 26.3  |  |  |  |
| 11 ½          | 778    | 3860 | 6.5  | 907    | 4500 | 10.1 | 1020   | 5040  | 14.1 | 1110   | 5500 | 18.5  |               |        |      |       |  |  |  |
| 12            | 799    | 4478 | 7.3  | 930    | 5210 | 11.3 | 1045   | 5840  | 15.9 | 1135   | 6380 | 20.8  |               |        |      |       |  |  |  |

| No. of Blower | R.P.M. | 8 Oz. Cap. | H.P. | R.P.M. | 10 Oz. Cap. | H.P. | No. of Blower | R.P.M. | 12 Oz. Cap. | H.P. | R.P.M. | 14 Oz. Cap. | H.P. | R.P.M. | 16 Oz. Cap. | H.P. |
|---------------|--------|------------|------|--------|-------------|------|---------------|--------|-------------|------|--------|-------------|------|--------|-------------|------|
| 5             | 4130   | 950        | 4.14 |        |             |      | 6             | 4380   | 1510        | 9.90 |        |             |      |        |             |      |
| 6             | 3585   | 1240       | 5.42 | 4000   | 1385        | 7.55 | 7             | 3880   | 1790        | 11.7 | 4195   | 1930        | 14.7 |        |             |      |
| 7             | 3180   | 1470       | 6.40 | 3560   | 1640        | 8.90 | 8             | 3525   | 2705        | 17.6 | 3810   | 2920        | 22.3 | 4060   | 3115        | 27.1 |
| 8             | 2890   | 2220       | 9.66 | 3225   | 2480        | 13.6 | 9             | 3155   | 3825        | 25.0 | 3410   | 4125        | 31.4 | 3635   | 4400        | 38.3 |
| 9             | 2585   | 3135       | 13.7 | 2890   | 3500        | 19.0 | 10            | 2360   | 5595        | 36.5 | 2545   | 6040        | 46.1 | 2720   | 6510        | 56.7 |
| 10            | 1935   | 4590       | 20.0 | 2160   | 5135        | 27.9 | 11            | 1970   | 6900        | 45.0 | 2120   | 7455        | 56.7 | 2265   | 7940        | 69.1 |
| 11            | 1615   | 5660       | 24.7 | 1800   | 6320        | 34.4 | 11 ½          | 1555   | 7720        | 52.0 | 1680   | 8340        | 65.5 | 1795   | 8960        | 80.5 |
| 11 ½          | 1280   | 6350       | 28.5 | 1425   | 7150        | 40.2 | 12            | 1595   | 8955        | 58.4 | 1720   | 9660        | 73.5 | 1840   | 10395       | 90.5 |
| 12            | 1310   | 7350       | 32.0 | 1460   | 8200        | 44.6 |               |        |             |      |        |             |      |        |             |      |



Clockwise  
Bottom Horizontal  
Discharge

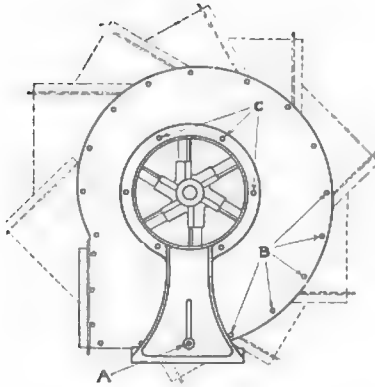
Dimensions in Inches

| Size No. | Outlet Diameter Outside |        |        |        |        |        |        |        | PULLEYS  |       |
|----------|-------------------------|--------|--------|--------|--------|--------|--------|--------|----------|-------|
|          |                         | E      | F      | J      | K      | L      | M      | Weight | Diameter | Face  |
| 1        | 3 1/2                   | 6 1/8  | 5 1/4  | 6 7/8  | 5 1/8  | 3 1/2  | 14 1/4 | 55     | 2 1/4    | 1 3/4 |
| 2        | 4                       | 7 1/4  | 6 3/8  | 9 1/8  | 5 1/8  | 3 3/4  | 19 1/2 | 75     | 2 3/4    | 2 1/4 |
| 3        | 4 5/8                   | 11 1/8 | 8 1/4  | 10 3/4 | 8 1/8  | 4 5/8  | 23     | 95     | 3        | 2 5/8 |
| 4        | 5                       | 13 1/8 | 10 3/8 | 13 1/2 | 9 1/8  | 5 1/8  | 25 1/4 | 135    | 4        | 3     |
| 5        | 5 3/8                   | 14 1/4 | 11 1/8 | 14 1/4 | 11 1/2 | 4 1/2  | 24 1/2 | 180    | 4 1/4    | 3     |
| 6        | 6 1/8                   | 15 3/4 | 13 1/4 | 16 5/8 | 12 5/8 | 5 3/8  | 27 1/2 | 265    | 4 1/2    | 3 1/2 |
| 7        | 7 1/4                   | 16 1/4 | 15 1/8 | 19     | 14     | 6 1/4  | 34     | 308    | 5        | 4 1/2 |
| 8        | 8 1/8                   | 19 1/8 | 17 3/8 | 21 7/8 | 16 3/8 | 8 5/8  | 40     | 445    | 6        | 4 1/2 |
| 9        | 10                      | 22     | 20     | 24 3/4 | 18 7/8 | 9 3/8  | 41 1/2 | 635    | 7        | 5     |
| 10       | 12 1/8                  | 27 5/8 | 25 3/8 | 30 1/8 | 25 1/2 | 10 3/8 | 45     | 820    | 8        | 5 3/4 |
| 11       | 14 3/8                  | 27 1/2 | 30 7/8 | 36     | 29 1/8 | 11 1/8 | 50     | 1400   | 8 1/2    | 6 1/2 |
| 11 1/2   | 16 3/4                  | 33 1/4 | 35 3/8 | 41 1/4 | 34     | 12 1/4 | 53 1/4 | 1900   | 10       | 7     |
| 12       | 18                      | 33     | 35 3/8 | 41 1/4 | 34     | 12 3/8 | 53 1/4 | 1950   | 10       | 8     |

Nos. 1 to 6 have but one pulley, while all larger sizes have two pulleys, as shown above.

*Buffalo*

## Buffalo Standard Reversible Steel Plate Mill Exhausters



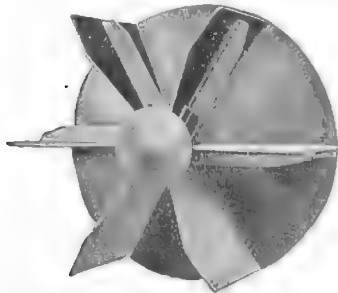
These exhausters have reversible housings, adjustable to either rotation and to any change of discharge. To change the direction of discharge, it is only necessary to loosen the hook bolts "C" in the ring of each pedestal and take out bolt "A," then revolve the housing until the discharge points in the desired direction. To change the direction of rotation remove the hook bolts "C," loosen set screws holding the blast wheel to shaft, then shift the pedestals.

The advantages are self-evident. One fan may be used to meet any requirement, eliminating the necessity for crossed belts and avoiding all sharp angles. To the mill owner this is desirable, because it is frequently necessary to change the position of the fan, due to alterations or enlargement of the piping and building. And dealers need not carry in stock fans of each rotation and angle of discharge.

Heavy rolled steel plate, securely bolted together with angle irons, is used in the construction of the housing. A round steel outlet is bolted to the housing. Blast wheel is mounted upon a heavy cast iron spider. Spokes are of Tee steel, cast into the hub. Heavy steel plate blades are riveted to these spokes, reinforced by securely riveted side flanges.



Standard Blast Wheel



Special Long Shaving  
or Cone Wheel

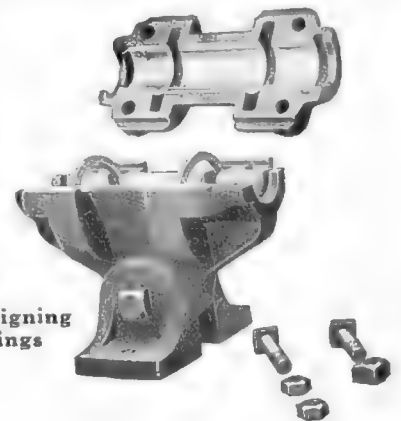
When heavy, bulky or abrasive material is to be handled, extra heavy blast wheels are furnished. For handling long shavings and similar stringy material the cone type wheel is recommended.

Every wheel is balanced by our special method which insures smooth running and absence of vibration, and is tested at speeds far beyond those required in practice.

Bearings are self-aligning vertically and are bolted to the pedestal in such a way that considerable adjustment is possible horizontally, making the bearings to all practical purposes self-aligning in both directions.

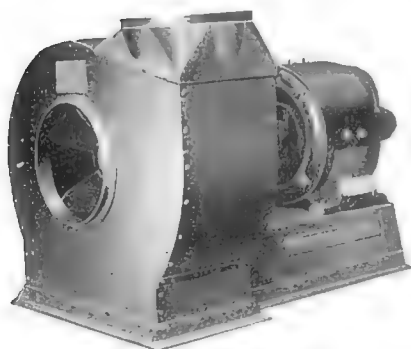
The journal, five diameters in length and lined with the best white metal, has two chambers for the oil rings. These rings constantly carry oil to the shaft. It is impossible for the bearings to be without lubrication as long as there is oil in the chambers. The rings operate perfectly quiet until oil becomes low. Any noise, therefore, is a signal for re-oiling.

Details of Buffalo Self-aligning  
Double Oil-Ring Bearings

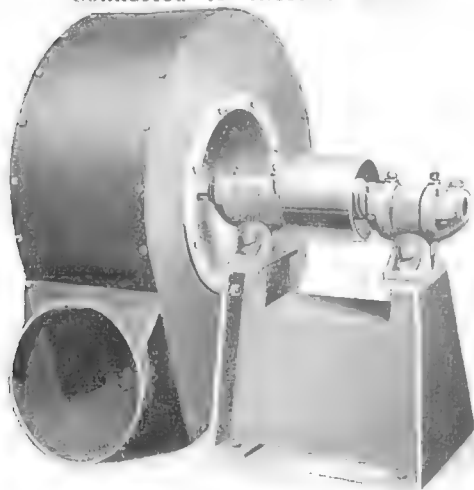


*Buffalo*

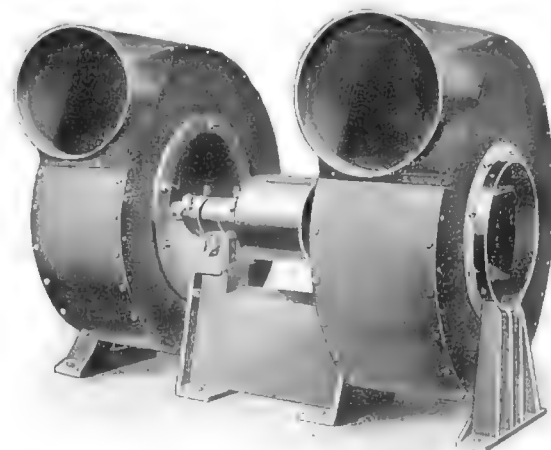
## Buffalo Direct-Connected Mill Exhausters



Up-Blast Standard Mill Exhauster, Direct Connected to Electric Motor



Buffalo Standard Reversible Single Mill Exhauster, Bottom Horizontal Discharge



Buffalo Standard Reversible Double Mill Exhauster —Top Horizontal Discharge

Buffalo direct-connected outfits can often be used to advantage since belting is avoided and floor space economized. The motor is placed on a sheet steel sub-base rigidly attached to the housing, making a single complete unit, impossible to get out of alignment. These outfits may be mounted on platforms near the ceiling, a convenient location as it is desirable to keep the main discharge pipe close to the ceiling. In requesting quotations, give characteristics of electric current available.

**Rubber-Lined Mill Exhausters**—For handling corrosive fumes, these fans can be furnished coated with pure live rubber, vulcanized to steel shaft and inside of housing.

### BUFFALO STANDARD MILL EXHAUSTERS

Capacities Under Normal Working Conditions

| 1" Static Pressure<br>or 0.577 Ounces |        |        |      | 2" Static Pressure<br>or 1.154 Ounces |        |      |  | 3" Static Pressure<br>or 1.734 Ounces |        |      |  | 4" Static Pressure<br>or 2.307 Ounces |        |      |  | 5" Static Pressure<br>or 2.884 Ounces |        |      |  |
|---------------------------------------|--------|--------|------|---------------------------------------|--------|------|--|---------------------------------------|--------|------|--|---------------------------------------|--------|------|--|---------------------------------------|--------|------|--|
| Size                                  | R.P.M. | A.P.M. | H.P. | R.P.M.                                | A.P.M. | H.P. |  | R.P.M.                                | A.P.M. | H.P. |  | R.P.M.                                | A.P.M. | H.P. |  | R.P.M.                                | A.P.M. | H.P. |  |
| 25                                    | 898    | 890    | .25  | 1270                                  | 1260   | .70  |  | 1555                                  | 1540   | 1.29 |  | 1795                                  | 1780   | 1.98 |  | 2008                                  | 1990   | 2.78 |  |
| 30                                    | 747    | 1280   | .36  | 1058                                  | 1815   | 1.01 |  | 1294                                  | 2220   | 1.85 |  | 1495                                  | 2565   | 2.85 |  | 1672                                  | 2870   | 3.98 |  |
| 35                                    | 640    | 1740   | .48  | 905                                   | 2465   | 1.37 |  | 1109                                  | 3020   | 2.52 |  | 1280                                  | 3485   | 3.88 |  | 1430                                  | 3900   | 5.42 |  |
| 40                                    | 561    | 2275   | .64  | 793                                   | 3220   | 1.79 |  | 972                                   | 3940   | 3.30 |  | 1122                                  | 4550   | 5.09 |  | 1255                                  | 5090   | 7.12 |  |
| 45                                    | 499    | 2880   | .80  | 706                                   | 4070   | 2.27 |  | 885                                   | 4990   | 4.17 |  | 998                                   | 5760   | 6.44 |  | 1117                                  | 6450   | 8.98 |  |
| 50                                    | 449    | 3555   | .99  | 635                                   | 5030   | 2.80 |  | 778                                   | 6160   | 5.15 |  | 898                                   | 7120   | 7.95 |  | 1004                                  | 7960   | 11.1 |  |
| 55                                    | 408    | 4300   | 1.20 | 578                                   | 6100   | 3.39 |  | 707                                   | 7460   | 6.23 |  | 816                                   | 8620   | 9.62 |  | 913                                   | 9635   | 13.4 |  |
| 60                                    | 374    | 5120   | 1.43 | 529                                   | 7250   | 4.04 |  | 648                                   | 8870   | 7.42 |  | 748                                   | 10250  | 11.4 |  | 836                                   | 11450  | 16.0 |  |
| 70                                    | 321    | 6975   | 1.94 | 453                                   | 9865   | 5.50 |  | 555                                   | 12070  | 10.1 |  | 640                                   | 13930  | 15.6 |  | 715                                   | 15580  | 21.7 |  |
| 80                                    | 281    | 9100   | 2.54 | 397                                   | 12880  | 7.79 |  | 486                                   | 15760  | 13.2 |  | 561                                   | 18200  | 20.4 |  | 628                                   | 20360  | 28.5 |  |
| 90                                    | 249    | 11520  | 3.21 | 353                                   | 16280  | 9.09 |  | 432                                   | 19960  | 16.7 |  | 499                                   | 23040  | 25.8 |  | 558                                   | 25800  | 36.0 |  |
| 100                                   | 225    | 14220  | 3.96 | 318                                   | 20120  | 11.2 |  | 389                                   | 24640  | 20.6 |  | 449                                   | 28480  | 31.8 |  | 502                                   | 31840  | 44.3 |  |

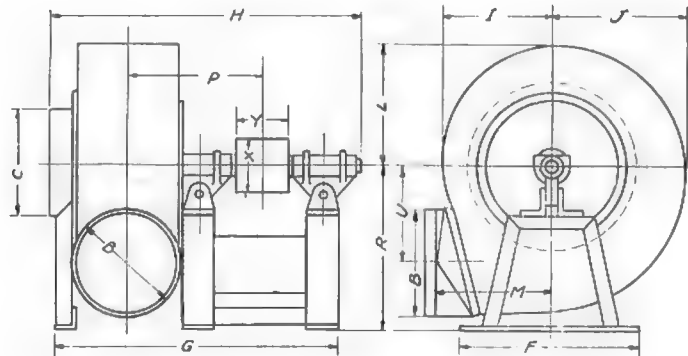
| 6" Static Pressure<br>or 3.460 Ounces |        |        |      | 7" Static Pressure<br>or 4.04 Ounces |        |      |  | 8" Static Pressure<br>or 4.614 Ounces |        |      |  | 9" Static Pressure<br>or 5.19 Ounces |        |       |  | 10" Static Pressure<br>or 5.768 Ounces |        |       |  |
|---------------------------------------|--------|--------|------|--------------------------------------|--------|------|--|---------------------------------------|--------|------|--|--------------------------------------|--------|-------|--|--|--------|-------|--|
| Size                                  | R.P.M. | A.P.M. | H.P. | R.P.M.                               | A.P.M. | H.P. |  | R.P.M.                                | A.P.M. | H.P. |  | R.P.M.                               | A.P.M. | H.P.  |  | R.P.M.                                 | A.P.M. | H.P.  |  |
| 25                                    | 2200   | 2180   | 3.66 | 2375                                 | 2355   | 4.61 |  | 2540                                  | 2515   | 5.62 |  | 2692                                 | 2670   | 6.70  |  | 2840                                   | 2815   | 7.86  |  |
| 30                                    | 1830   | 3140   | 5.23 | 1978                                 | 3390   | 6.60 |  | 2115                                  | 3630   | 8.06 |  | 2240                                 | 3850   | 9.62  |  | 2365                                   | 4055   | 11.2  |  |
| 35                                    | 1568   | 4270   | 7.12 | 1693                                 | 4615   | 8.97 |  | 1810                                  | 4930   | 10.9 |  | 1920                                 | 5230   | 13.1  |  | 2026                                   | 5515   | 15.3  |  |
| 40                                    | 1373   | 5575   | 9.33 | 1483                                 | 6025   | 11.8 |  | 1587                                  | 6440   | 14.4 |  | 1683                                 | 6830   | 17.2  |  | 1773                                   | 7200   | 20.07 |  |
| 45                                    | 1223   | 7060   | 11.8 | 1322                                 | 7625   | 14.9 |  | 1413                                  | 8150   | 18.1 |  | 1498                                 | 8650   | 21.7  |  | 1578                                   | 9120   | 25.36 |  |
| 50                                    | 1100   | 8720   | 14.6 | 1188                                 | 9420   | 18.4 |  | 1270                                  | 10070  | 22.4 |  | 1347                                 | 10680  | 26.7  |  | 1420                                   | 11250  | 31.3  |  |
| 55                                    | 1000   | 10550  | 17.6 | 1080                                 | 11400  | 22.2 |  | 1154                                  | 12180  | 27.1 |  | 1224                                 | 12930  | 32.4  |  | 1290                                   | 13620  | 37.87 |  |
| 60                                    | 915    | 12550  | 20.9 | 989                                  | 13560  | 26.4 |  | 1058                                  | 14500  | 32.3 |  | 1120                                 | 15370  | 38.5  |  | 1183                                   | 16200  | 45.1  |  |
| 70                                    | 789    | 17070  | 28.5 | 847                                  | 18430  | 35.8 |  | 905                                   | 19700  | 43.6 |  | 960                                  | 20900  | 52.5  |  | 1013                                   | 22050  | 61.2  |  |
| 80                                    | 687    | 22300  | 37.3 | 742                                  | 24100  | 47.2 |  | 794                                   | 25760  | 57.5 |  | 842                                  | 27320  | 68.7  |  | 887                                    | 28800  | 80.3  |  |
| 90                                    | 611    | 28240  | 47.2 | 661                                  | 30500  | 59.5 |  | 706                                   | 32600  | 72.7 |  | 749                                  | 34600  | 86.8  |  | 789                                    | 36480  | 101.5 |  |
| 100                                   | 550    | 34880  | 58.2 | 595                                  | 37680  | 73.3 |  | 636                                   | 40280  | 89.6 |  | 674                                  | 42720  | 107.0 |  | 710                                    | 45000  | 125.2 |  |

*Buffalo*



# Buffalo Standard Reversible Mill Exhausters (SINGLE)

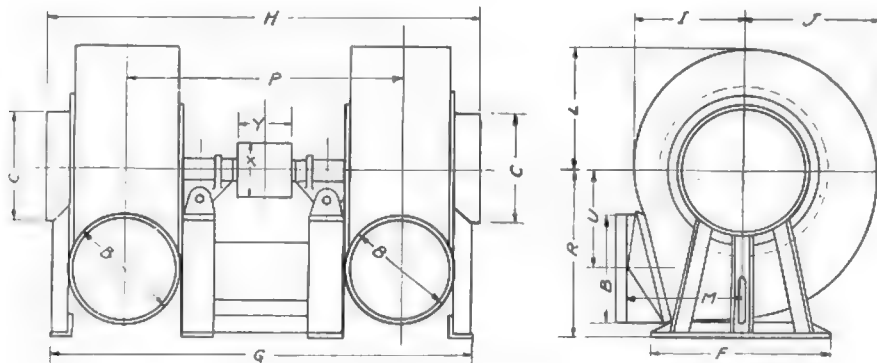
**Clockwise  
Bottom Horizontal  
Discharge**



Dimensions in Inches

| Size | B  | C  | F      | G      | H      | I      | J      | L      | M      | P      | R      | U      | X  | Y      |
|------|----|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----|--------|
| 25   | 10 | 10 | 11 1/2 | 26 3/4 | 28 3/4 | 9 7/8  | 12 3/8 | 11 1/8 | 10 5/8 | 13 1/4 | 15 1/4 | 9 1/8  | 5  | 4      |
| 30   | 12 | 12 | 13     | 29 5/8 | 32 1/4 | 12     | 15     | 13 1/2 | 13     | 14 1/4 | 18     | 11     | 6  | 4 1/2  |
| 35   | 14 | 14 | 14     | 32 3/8 | 35     | 13 3/8 | 17 3/8 | 15 5/8 | 15 1/8 | 15 5/8 | 20 3/4 | 13 1/8 | 7  | 5 1/2  |
| 40   | 16 | 16 | 15     | 35 7/8 | 38 3/4 | 16     | 20     | 18     | 16 7/8 | 17 1/4 | 24     | 15 1/4 | 8  | 6 1/2  |
| 45   | 18 | 18 | 16 1/2 | 40 3/4 | 43 3/4 | 17 7/8 | 22 3/8 | 20 1/8 | 19 1/4 | 19 3/4 | 26 5/8 | 16 1/2 | 9  | 7 1/2  |
| 50   | 20 | 20 | 18     | 44     | 47     | 19 3/4 | 24 3/4 | 22 1/4 | 21 1/4 | 21 1/4 | 29 1/4 | 18 1/8 | 10 | 8 1/2  |
| 55   | 22 | 22 | 26     | 48     | 51     | 21 5/8 | 27 1/8 | 24 3/8 | 23     | 23 1/8 | 32     | 19 1/4 | 11 | 9 1/2  |
| 60   | 24 | 24 | 27     | 50 1/2 | 53 1/2 | 23 3/4 | 29 3/4 | 26 3/4 | 25     | 24 3/8 | 35     | 22 1/4 | 12 | 10 1/2 |
| 70   | 28 | 28 | 31     | 56 3/4 | 60 1/2 | 27 1/2 | 34 1/2 | 31     | 28 3/4 | 27 1/4 | 40     | 25 1/4 | 14 | 11 1/2 |
| 80   | 32 | 32 | 33     | 61     | 64 3/4 | 31 1/2 | 39 1/2 | 35 1/2 | 28 5/8 | 29 5/8 | 45 1/2 | 29 1/2 | 16 | 12 1/2 |

(DOUBLE)



**Clockwise  
Bottom  
Horizontal  
Discharge**

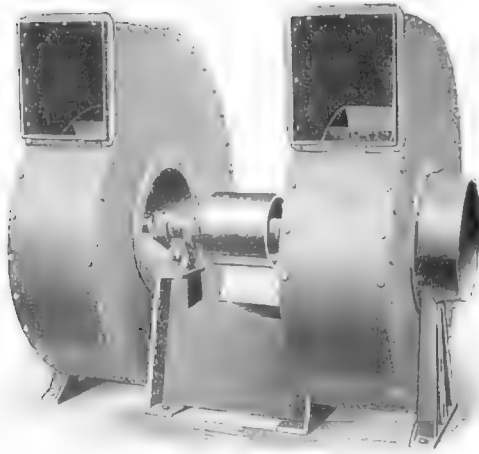
Dimensions in Inches

| Size | B  | C  | F      | G       | H       | I      | J      | L      | M      | P      | R      | U      | X  | Y      |
|------|----|----|--------|---------|---------|--------|--------|--------|--------|--------|--------|--------|----|--------|
| 30   | 12 | 12 | 13     | 45 5/8  | 48      | 12     | 15     | 13 1/2 | 13     | 30 3/4 | 18     | 11     | 6  | 6 1/2  |
| 35   | 14 | 14 | 14     | 50 3/4  | 51 1/8  | 13 3/8 | 17 3/8 | 15 5/8 | 15 1/8 | 34 3/8 | 20 3/4 | 13 1/8 | 7  | 7 1/2  |
| 40   | 16 | 16 | 15     | 56 1/4  | 56 3/8  | 16     | 20     | 18     | 16 7/8 | 38 1/8 | 24     | 15 1/4 | 8  | 8 1/2  |
| 45   | 18 | 18 | 16 1/2 | 64 1/2  | 64 1/8  | 17 7/8 | 22 3/8 | 20 1/8 | 19 1/4 | 42 7/8 | 26 5/8 | 16 1/2 | 10 | 9 1/2  |
| 50   | 20 | 20 | 18     | 70 3/8  | 69 7/8  | 19 3/4 | 24 3/4 | 22 1/4 | 21 1/4 | 46 5/8 | 29 1/4 | 18 1/8 | 12 | 10 1/2 |
| 55   | 22 | 22 | 26     | 75 1/2  | 75      | 21 5/8 | 27 1/8 | 24 3/8 | 23     | 50 1/8 | 32     | 19 1/4 | 13 | 11 1/2 |
| 60   | 24 | 24 | 27     | 81 5/8  | 81 1/8  | 23 3/4 | 29 3/4 | 26 3/4 | 25     | 54 3/4 | 35     | 22 1/4 | 14 | 12 1/2 |
| 70   | 28 | 28 | 31     | 90 7/8  | 90 5/8  | 27 1/2 | 34 1/2 | 31     | 28 3/4 | 59 1/4 | 40     | 25 1/4 | 16 | 14     |
| 80   | 32 | 32 | 33     | 101 1/8 | 100 7/8 | 31 1/2 | 39 1/2 | 35 1/2 | 28 5/8 | 66 1/2 | 45 1/2 | 29 1/2 | 20 | 16     |

**Buffalo**

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## Buffalo Slow Speed, High Efficiency Mill Exhausters



**Double Slow Speed Mill Exhauster**

It is evident enough that all of the claims made for high efficiency mill exhausters cannot be true. Outside of the actual experience, nothing would be so apt to convince a customer as a truthful explanation of our claims for high efficiency.

Slow speed fans are no more efficient on account of the reduced speed, except in so far as they cause less slippage of belts. They do decrease the wear and tear and vibration, and in the long run would be a good investment even if the power required were the same.

Manufacturers who actually build a slow speed fan do not use a special wheel inside the regular housing, but use an entirely different design, and besides the reduction in speed, they make some attempt to secure better efficiency by improvements in design.

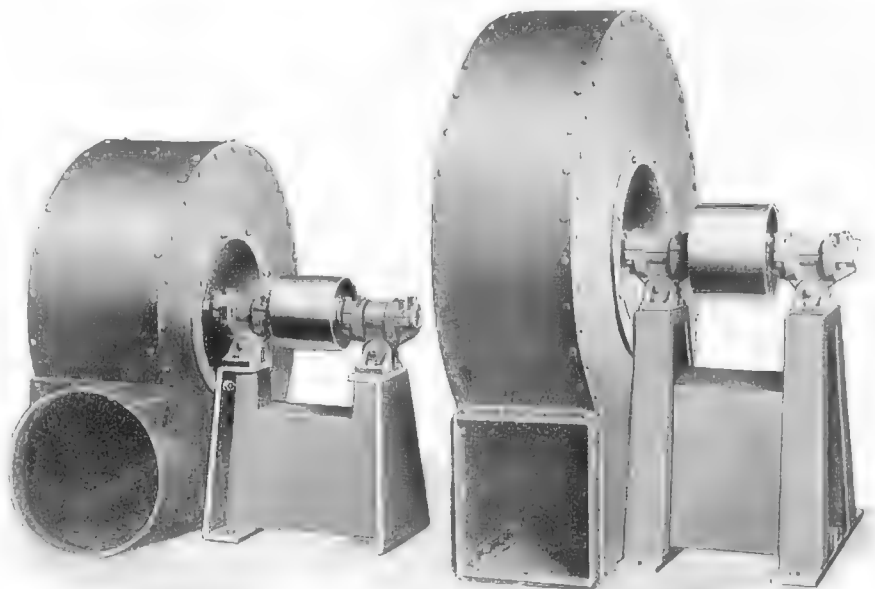
It has long been recognized by fan builders, or at least by those who do any experimental work, that the ordinary proportions of mill exhausters are such as to give large capacity but not very high efficiency. We believe, and our results show, that we have gone into this question more thoroughly than any other manufacturer, and that the Buffalo slow speed fan design is the best on the market.

Actual installation of Buffalo Slow Speed Exhausters show power savings from 15 to 50%. The former figure represents the difference in efficiency between this fan and the standard fans, and in the latter is included the additional saving due to improved layout of piping often effected by our engineering service.

In all Buffalo Slow Speed Exhausters the material does not come in contact with the back side sheet of the fan housing, which greatly increases the life of the fan.

When refuse from the barkers or similar material is to be handled, a still heavier construction is essential. The proper apparatus will always be furnished upon receipt of full details about requirements.

This illustrates the difference in size and design of Buffalo Standard and Slow Speed Exhausters. Having the same capacities both are called 50" fans.

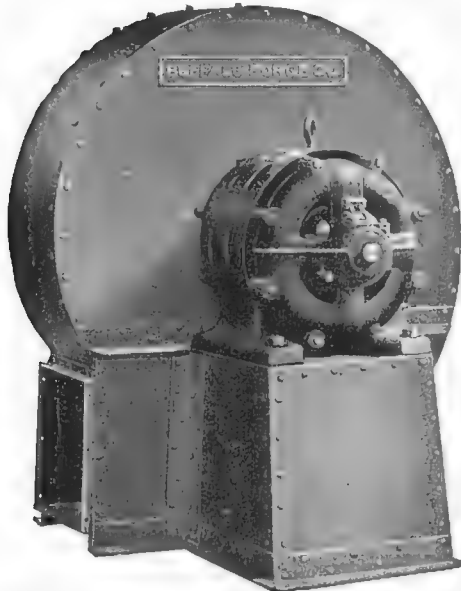


**Standard Mill Exhauster**

**Slow Speed, High Efficiency  
Mill Exhauster**

***"Buffalo"***

## Buffalo High Efficiency Direct Connected Exhausters

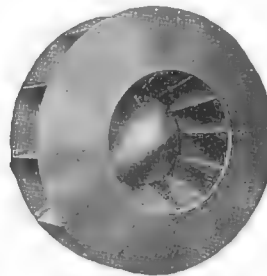


Buffalo Slow Speed Mill Exhauster  
Direct Connected to Motor

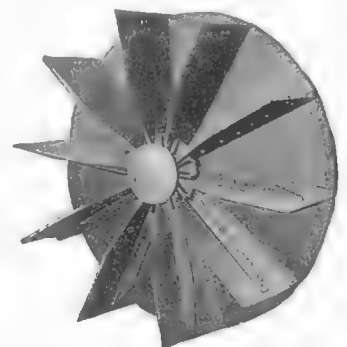
Electric driven direct-connected slow speed exhausters are highly recommended. Belting is avoided, floor space economized, and wear and tear reduced to a minimum.

The first cost of such a unit is more than for an ordinary fan, but due to the lower maintenance cost, it is invariably an investment which from our experience pays for itself in two years.

In requesting quotations, give characteristics of electric current.



Buffalo Slow Speed High  
Efficiency Blast Wheel



Blast Wheel for stringy  
material

## Buffalo Slow Speed Mill Exhausters

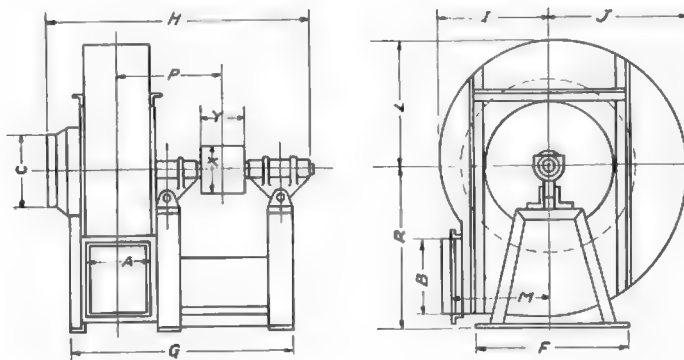
### CAPACITIES UNDER NORMAL WORKING CONDITIONS

| 1" Static Pressure<br>or 0.577 Ounces |        |        |      | 2" Static Pressure<br>or 1.154 Ounces |        |      | 3" Static Pressure<br>or 1.734 Ounces |        |      | 4" Static Pressure<br>or 2.307 Ounces |        |      | 5" Static Pressure<br>or 2.884 Ounces  |        |      |
|---------------------------------------|--------|--------|------|---------------------------------------|--------|------|---------------------------------------|--------|------|---------------------------------------|--------|------|--|--------|------|
| Size                                  | R.P.M. | A.P.M. | H.P. | R.P.M.                                | A.P.M. | H.P. | R.P.M.                                | A.P.M. | H.P. | R.P.M.                                | A.P.M. | H.P. | R.P.M.                                 | A.P.M. | H.P. |
| 25                                    | 591    | 890    | .19  | 837                                   | 1260   | .55  | 1024                                  | 1540   | 1.01 | 1182                                  | 1780   | 1.55 | 1322                                   | 1990   | 2.17 |
| 30                                    | 494    | 1280   | .28  | 698                                   | 1815   | .79  | 855                                   | 2220   | 1.45 | 988                                   | 2565   | 2.24 | 1104                                   | 2870   | 3.13 |
| 35                                    | 423    | 1740   | .38  | 598                                   | 2465   | 1.07 | 733                                   | 3020   | 1.97 | 846                                   | 3485   | 3.03 | 947                                    | 3900   | 4.25 |
| 40                                    | 370    | 2275   | .50  | 523                                   | 3220   | 1.40 | 641                                   | 3940   | 2.58 | 740                                   | 4550   | 3.98 | 827                                    | 5090   | 5.56 |
| 45                                    | 329    | 2880   | .62  | 466                                   | 4070   | 1.78 | 570                                   | 4990   | 3.26 | 658                                   | 5760   | 5.00 | 737                                    | 6450   | 7.03 |
| 50                                    | 296    | 3555   | .77  | 419                                   | 5030   | 2.20 | 513                                   | 6160   | 4.03 | 592                                   | 7120   | 6.20 | 662                                    | 7960   | 8.68 |
| 55                                    | 269    | 4300   | .94  | 381                                   | 6100   | 2.67 | 466                                   | 7460   | 4.88 | 538                                   | 8620   | 7.50 | 602                                    | 9635   | 10.5 |
| 60                                    | 247    | 5120   | 1.12 | 349                                   | 7250   | 3.17 | 427                                   | 8870   | 5.80 | 493                                   | 10250  | 8.93 | 551                                    | 11450  | 12.4 |
| 70                                    | 211    | 6975   | 1.51 | 299                                   | 9865   | 4.30 | 366                                   | 12070  | 7.88 | 422                                   | 13930  | 12.1 | 473                                    | 15580  | 17.1 |
| 80                                    | 185    | 9100   | 2.00 | 261                                   | 12880  | 5.58 | 320                                   | 15760  | 10.3 | 370                                   | 18200  | 15.9 | 413                                    | 20360  | 22.2 |
| 90                                    | 164    | 11520  | 2.49 | 233                                   | 16280  | 7.17 | 285                                   | 19960  | 13.1 | 329                                   | 23040  | 20.2 | 368                                    | 25800  | 28.2 |
| 100                                   | 148    | 14220  | 3.11 | 209                                   | 20120  | 8.78 | 256                                   | 24640  | 16.1 | 296                                   | 28480  | 24.9 | 330                                    | 31840  | 34.5 |
| 6" Static Pressure<br>or 3.460 Ounces |        |        |      | 7" Static Pressure<br>or 4.04 Ounces  |        |      | 8" Static Pressure<br>or 4.614 Ounces |        |      | 9" Static Pressure<br>or 5.19 Ounces  |        |      | 10" Static Pressure<br>or 5.768 Ounces |        |      |
| Size                                  | R.P.M. | A.P.M. | H.P. | R.P.M.                                | A.P.M. | H.P. | R.P.M.                                | A.P.M. | H.P. | R.P.M.                                | A.P.M. | H.P. | R.P.M.                                 | A.P.M. | H.P. |
| 25                                    | 1448   | 2180   | 2.86 | 1563                                  | 2355   | 3.59 | 1672                                  | 2515   | 4.39 | 1772                                  | 2670   | 5.22 | 1868                                   | 2815   | 6.13 |
| 30                                    | 1209   | 3140   | 4.11 | 1307                                  | 3390   | 5.19 | 1397                                  | 3630   | 6.33 | 1480                                  | 3850   | 7.55 | 1562                                   | 4055   | 8.88 |
| 35                                    | 1038   | 4270   | 5.59 | 1120                                  | 4615   | 7.03 | 1197                                  | 4930   | 8.55 | 1270                                  | 5230   | 10.3 | 1338                                   | 5515   | 12.0 |
| 40                                    | 906    | 5575   | 7.30 | 978                                   | 6025   | 9.20 | 1046                                  | 6440   | 11.2 | 1110                                  | 6830   | 13.4 | 1170                                   | 7200   | 15.8 |
| 45                                    | 806    | 7060   | 9.20 | 871                                   | 7625   | 11.6 | 931                                   | 8150   | 14.2 | 987                                   | 8650   | 16.9 | 1041                                   | 9120   | 19.8 |
| 50                                    | 725    | 8720   | 11.4 | 783                                   | 9420   | 14.4 | 837                                   | 10070  | 17.6 | 888                                   | 10680  | 21.0 | 935                                    | 11250  | 24.4 |
| 55                                    | 660    | 10550  | 13.9 | 712                                   | 11400  | 17.4 | 762                                   | 12180  | 21.3 | 807                                   | 12930  | 25.4 | 851                                    | 13620  | 29.7 |
| 60                                    | 604    | 12550  | 16.4 | 652                                   | 13560  | 20.7 | 696                                   | 14500  | 25.2 | 739                                   | 15370  | 30.2 | 779                                    | 16200  | 35.3 |
| 70                                    | 517    | 17070  | 22.3 | 559                                   | 18430  | 28.2 | 597                                   | 19700  | 34.3 | 633                                   | 20900  | 40.8 | 669                                    | 22050  | 48.0 |
| 80                                    | 453    | 22300  | 29.2 | 489                                   | 24100  | 36.8 | 523                                   | 25760  | 44.8 | 555                                   | 27320  | 53.6 | 585                                    | 28800  | 63.2 |
| 90                                    | 403    | 28240  | 36.8 | 435                                   | 30500  | 46.6 | 465                                   | 32600  | 56.8 | 493                                   | 34600  | 67.8 | 520                                    | 36480  | 79.6 |
| 100                                   | 362    | 34880  | 45.7 | 391                                   | 37680  | 57.3 | 418                                   | 40280  | 70.0 | 443                                   | 42720  | 83.3 | 467                                    | 45000  | 97.8 |

*Buffalo*

# Buffalo Slow Speed High Efficiency Mill Exhausters (SINGLE)

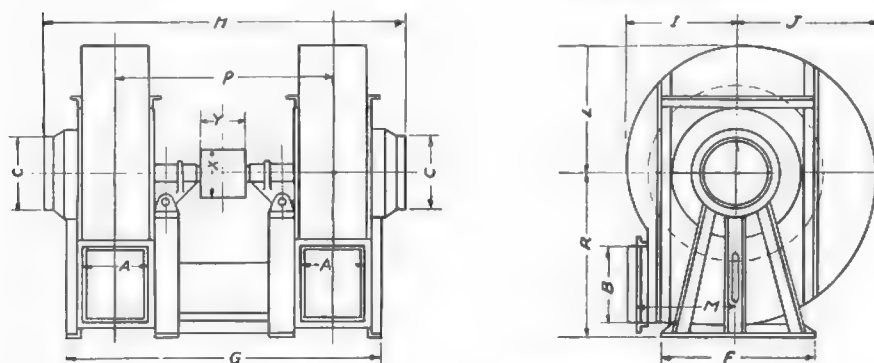
**Clockwise  
Bottom Horizontal  
Discharge**



**Dimensions in Inches**

| Size | A                              | B                              | C                              | F                              | G                               | H                              | I                               | J                               | L                              | M                              | P                               | R                              | X  | Y                             |
|------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|---------------------------------|--------------------------------|---------------------------------|---------------------------------|--------------------------------|--------------------------------|---------------------------------|--------------------------------|----|-------------------------------|
| 25   | 8 <sup>5</sup> / <sub>8</sub>  | 9 <sup>7</sup> / <sub>8</sub>  | 10 <sup>1</sup> / <sub>2</sub> | 13                             | 28 <sup>1</sup> / <sub>4</sub>  | 32 <sup>3</sup> / <sub>8</sub> | 131 <sup>1</sup> / <sub>2</sub> | 17 <sup>1</sup> / <sub>16</sub> | 15 <sup>3</sup> / <sub>8</sub> | 12 <sup>1</sup> / <sub>4</sub> | 13 <sup>1</sup> / <sub>2</sub>  | 20 <sup>3</sup> / <sub>4</sub> | 6  | 4 <sup>1</sup> / <sub>2</sub> |
| 30   | 10 <sup>1</sup> / <sub>8</sub> | 12                             | 12 <sup>1</sup> / <sub>2</sub> | 14 <sup>1</sup> / <sub>2</sub> | 28 <sup>5</sup> / <sub>8</sub>  | 32 <sup>3</sup> / <sub>4</sub> | 16 <sup>5</sup> / <sub>8</sub>  | 20 <sup>7</sup> / <sub>8</sub>  | 18 <sup>5</sup> / <sub>8</sub> | 14 <sup>7</sup> / <sub>8</sub> | 13 <sup>5</sup> / <sub>8</sub>  | 24 <sup>3</sup> / <sub>8</sub> | 8  | 5                             |
| 35   | 11 <sup>3</sup> / <sub>4</sub> | 13 <sup>7</sup> / <sub>8</sub> | 14 <sup>5</sup> / <sub>8</sub> | 16                             | 31 <sup>5</sup> / <sub>8</sub>  | 36                             | 19 <sup>1</sup> / <sub>8</sub>  | 23 <sup>7</sup> / <sub>8</sub>  | 21 <sup>1</sup> / <sub>2</sub> | 17 <sup>5</sup> / <sub>8</sub> | 15 <sup>1</sup> / <sub>2</sub>  | 28 <sup>1</sup> / <sub>4</sub> | 9  | 6                             |
| 40   | 13 <sup>3</sup> / <sub>8</sub> | 15 <sup>7</sup> / <sub>8</sub> | 16 <sup>5</sup> / <sub>8</sub> | 24 <sup>3</sup> / <sub>4</sub> | 36 <sup>5</sup> / <sub>16</sub> | 40 <sup>3</sup> / <sub>8</sub> | 21 <sup>5</sup> / <sub>4</sub>  | 27                              | 24 <sup>7</sup> / <sub>8</sub> | 20 <sup>1</sup> / <sub>4</sub> | 17 <sup>5</sup> / <sub>8</sub>  | 31 <sup>5</sup> / <sub>8</sub> | 10 | 7                             |
| 45   | 15                             | 18                             | 18 <sup>5</sup> / <sub>8</sub> | 26 <sup>1</sup> / <sub>2</sub> | 39 <sup>1</sup> / <sub>16</sub> | 45                             | 24 <sup>1</sup> / <sub>2</sub>  | 30 <sup>1</sup> / <sub>2</sub>  | 27 <sup>1</sup> / <sub>2</sub> | 23                             | 19 <sup>1</sup> / <sub>16</sub> | 35 <sup>1</sup> / <sub>2</sub> | 11 | 8                             |
| 50   | 17                             | 19 <sup>5</sup> / <sub>8</sub> | 20 <sup>5</sup> / <sub>8</sub> | 28 <sup>1</sup> / <sub>2</sub> | 42 <sup>1</sup> / <sub>16</sub> | 48 <sup>1</sup> / <sub>4</sub> | 27 <sup>3</sup> / <sub>8</sub>  | 34 <sup>1</sup> / <sub>8</sub>  | 30 <sup>3</sup> / <sub>4</sub> | 25 <sup>7</sup> / <sub>8</sub> | 20 <sup>1</sup> / <sub>16</sub> | 39 <sup>1</sup> / <sub>2</sub> | 12 | 9                             |
| 55   | 18 <sup>1</sup> / <sub>2</sub> | 21 <sup>3</sup> / <sub>4</sub> | 22 <sup>3</sup> / <sub>4</sub> | 30 <sup>1</sup> / <sub>2</sub> | 46 <sup>1</sup> / <sub>16</sub> | 52 <sup>1</sup> / <sub>2</sub> | 30                              | 37 <sup>1</sup> / <sub>4</sub>  | 33 <sup>3</sup> / <sub>8</sub> | 28 <sup>1</sup> / <sub>4</sub> | 22 <sup>1</sup> / <sub>16</sub> | 42 <sup>7</sup> / <sub>8</sub> | 13 | 10                            |
| 60   | 20 <sup>1</sup> / <sub>4</sub> | 23 <sup>1</sup> / <sub>2</sub> | 24 <sup>3</sup> / <sub>4</sub> | 33                             | 49 <sup>1</sup> / <sub>16</sub> | 56                             | 32 <sup>3</sup> / <sub>4</sub>  | 40 <sup>3</sup> / <sub>4</sub>  | 36 <sup>3</sup> / <sub>4</sub> | 31                             | 23 <sup>1</sup> / <sub>16</sub> | 46 <sup>3</sup> / <sub>4</sub> | 14 | 11                            |
| 70   | 23 <sup>3</sup> / <sub>8</sub> | 27 <sup>3</sup> / <sub>8</sub> | 28 <sup>3</sup> / <sub>4</sub> | 38 <sup>1</sup> / <sub>2</sub> | 54 <sup>1</sup> / <sub>16</sub> | 63 <sup>1</sup> / <sub>4</sub> | 38 <sup>1</sup> / <sub>8</sub>  | 47 <sup>7</sup> / <sub>8</sub>  | 42 <sup>1</sup> / <sub>4</sub> | 36 <sup>3</sup> / <sub>8</sub> | 26 <sup>3</sup> / <sub>8</sub>  | 54                             | 16 | 12                            |
| 80   | 26 <sup>7</sup> / <sub>8</sub> | 31 <sup>1</sup> / <sub>8</sub> | 32 <sup>3</sup> / <sub>4</sub> | 41 <sup>3</sup> / <sub>4</sub> | 59 <sup>1</sup> / <sub>16</sub> | 68 <sup>7</sup> / <sub>8</sub> | 43 <sup>3</sup> / <sub>8</sub>  | 54 <sup>3</sup> / <sub>8</sub>  | 49                             | 41 <sup>7</sup> / <sub>8</sub> | 28 <sup>7</sup> / <sub>8</sub>  | 61 <sup>3</sup> / <sub>4</sub> | 20 | 14                            |

**(DOUBLE)**



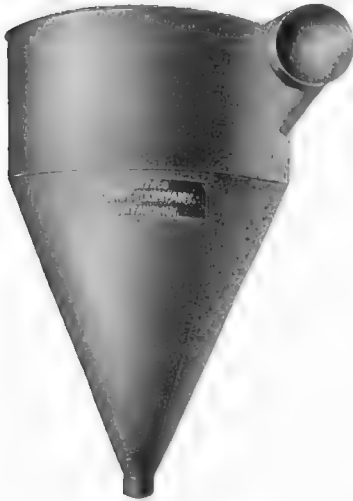
**Clockwise  
Bottom  
Horizontal  
Discharge**

**Dimensions in Inches**

| Size | A                              | B                              | C                              | F                              | G                               | H                               | I                               | J                               | L                              | M                              | P                              | R                              | X  | Y                              |
|------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|----|--------------------------------|
| 25   | 8 <sup>5</sup> / <sub>8</sub>  | 9 <sup>7</sup> / <sub>8</sub>  | 10 <sup>1</sup> / <sub>2</sub> | 13                             | 42 <sup>1</sup> / <sub>2</sub>  | 46                              | 131 <sup>1</sup> / <sub>2</sub> | 17 <sup>1</sup> / <sub>16</sub> | 15 <sup>3</sup> / <sub>8</sub> | 12 <sup>1</sup> / <sub>4</sub> | 30 <sup>1</sup> / <sub>4</sub> | 20 <sup>3</sup> / <sub>4</sub> | 6  | 6 <sup>1</sup> / <sub>2</sub>  |
| 30   | 10 <sup>1</sup> / <sub>8</sub> | 12                             | 12 <sup>1</sup> / <sub>2</sub> | 14 <sup>1</sup> / <sub>2</sub> | 44                              | 47 <sup>1</sup> / <sub>2</sub>  | 16 <sup>5</sup> / <sub>8</sub>  | 20 <sup>3</sup> / <sub>8</sub>  | 18 <sup>5</sup> / <sub>8</sub> | 14 <sup>7</sup> / <sub>8</sub> | 30                             | 24 <sup>3</sup> / <sub>8</sub> | 8  | 7 <sup>1</sup> / <sub>2</sub>  |
| 35   | 11 <sup>3</sup> / <sub>4</sub> | 13 <sup>7</sup> / <sub>8</sub> | 14 <sup>5</sup> / <sub>8</sub> | 16                             | 48 <sup>1</sup> / <sub>2</sub>  | 52 <sup>5</sup> / <sub>8</sub>  | 19 <sup>1</sup> / <sub>8</sub>  | 23 <sup>7</sup> / <sub>8</sub>  | 21 <sup>1</sup> / <sub>2</sub> | 17 <sup>5</sup> / <sub>8</sub> | 32 <sup>7</sup> / <sub>8</sub> | 28 <sup>1</sup> / <sub>4</sub> | 9  | 8 <sup>1</sup> / <sub>2</sub>  |
| 40   | 13 <sup>3</sup> / <sub>8</sub> | 15 <sup>7</sup> / <sub>8</sub> | 16 <sup>5</sup> / <sub>8</sub> | 24 <sup>3</sup> / <sub>4</sub> | 56 <sup>5</sup> / <sub>8</sub>  | 59 <sup>3</sup> / <sub>4</sub>  | 21 <sup>5</sup> / <sub>4</sub>  | 27                              | 24 <sup>7</sup> / <sub>8</sub> | 20 <sup>1</sup> / <sub>4</sub> | 38 <sup>1</sup> / <sub>4</sub> | 31 <sup>5</sup> / <sub>8</sub> | 11 | 9 <sup>1</sup> / <sub>2</sub>  |
| 45   | 15                             | 18                             | 18 <sup>5</sup> / <sub>8</sub> | 26 <sup>1</sup> / <sub>2</sub> | 62 <sup>5</sup> / <sub>8</sub>  | 66 <sup>5</sup> / <sub>8</sub>  | 24 <sup>1</sup> / <sub>2</sub>  | 30 <sup>1</sup> / <sub>2</sub>  | 27 <sup>1</sup> / <sub>2</sub> | 23                             | 42 <sup>3</sup> / <sub>8</sub> | 35 <sup>1</sup> / <sub>2</sub> | 12 | 10 <sup>1</sup> / <sub>2</sub> |
| 50   | 17                             | 19 <sup>5</sup> / <sub>8</sub> | 20 <sup>5</sup> / <sub>8</sub> | 28 <sup>1</sup> / <sub>2</sub> | 68 <sup>1</sup> / <sub>2</sub>  | 72 <sup>1</sup> / <sub>2</sub>  | 27 <sup>3</sup> / <sub>8</sub>  | 34 <sup>1</sup> / <sub>8</sub>  | 30 <sup>3</sup> / <sub>4</sub> | 25 <sup>7</sup> / <sub>8</sub> | 45 <sup>5</sup> / <sub>8</sub> | 39 <sup>1</sup> / <sub>2</sub> | 13 | 11 <sup>1</sup> / <sub>2</sub> |
| 55   | 18 <sup>1</sup> / <sub>2</sub> | 21 <sup>3</sup> / <sub>4</sub> | 22 <sup>3</sup> / <sub>4</sub> | 30 <sup>1</sup> / <sub>2</sub> | 74 <sup>1</sup> / <sub>8</sub>  | 79 <sup>1</sup> / <sub>8</sub>  | 30                              | 37 <sup>1</sup> / <sub>4</sub>  | 33 <sup>3</sup> / <sub>8</sub> | 28 <sup>1</sup> / <sub>4</sub> | 50 <sup>5</sup> / <sub>8</sub> | 42 <sup>7</sup> / <sub>8</sub> | 14 | 12 <sup>1</sup> / <sub>2</sub> |
| 60   | 20 <sup>1</sup> / <sub>4</sub> | 23 <sup>1</sup> / <sub>2</sub> | 24 <sup>3</sup> / <sub>4</sub> | 33                             | 81 <sup>1</sup> / <sub>8</sub>  | 85 <sup>1</sup> / <sub>8</sub>  | 32 <sup>3</sup> / <sub>4</sub>  | 40 <sup>3</sup> / <sub>4</sub>  | 36 <sup>3</sup> / <sub>4</sub> | 31                             | 54 <sup>5</sup> / <sub>8</sub> | 46 <sup>3</sup> / <sub>4</sub> | 16 | 15                             |
| 70   | 23 <sup>3</sup> / <sub>8</sub> | 27 <sup>3</sup> / <sub>8</sub> | 28 <sup>3</sup> / <sub>4</sub> | 38 <sup>1</sup> / <sub>2</sub> | 91 <sup>7</sup> / <sub>8</sub>  | 98 <sup>1</sup> / <sub>2</sub>  | 38 <sup>1</sup> / <sub>8</sub>  | 47 <sup>7</sup> / <sub>8</sub>  | 42 <sup>1</sup> / <sub>4</sub> | 36 <sup>3</sup> / <sub>8</sub> | 62 <sup>1</sup> / <sub>4</sub> | 54                             | 20 | 18                             |
| 80   | 26 <sup>7</sup> / <sub>8</sub> | 31 <sup>1</sup> / <sub>8</sub> | 32 <sup>3</sup> / <sub>4</sub> | 41 <sup>3</sup> / <sub>4</sub> | 103 <sup>3</sup> / <sub>8</sub> | 111 <sup>3</sup> / <sub>8</sub> | 43 <sup>3</sup> / <sub>8</sub>  | 54 <sup>3</sup> / <sub>8</sub>  | 49                             | 41 <sup>7</sup> / <sub>8</sub> | 70 <sup>1</sup> / <sub>2</sub> | 61 <sup>3</sup> / <sub>4</sub> | 24 | 22                             |

**"Buffalo"**

## Buffalo Dust and Refuse Collectors



These collectors or separators are built of heavy galvanized sheet steel, securely riveted and stiffened to meet the strains of service.

In operation, the air and refuse matter, discharged through the inlet near the top of the collector, is thrown against the side with a whirling motion. The air, thus suddenly admitted into an enlarged area, loses most of its velocity and escapes through the opening in the top. The heavier refuse matter, no longer supported by the velocity of the air, falls through the discharge orifice into the bin or other receptacle provided for it.

The "Buffalo" has no equal for separating such materials as shavings, sawdust, refuse from tumbling barrels, emery wheels, sanders, etc.

For handling abrasive materials such as emery dust and fine coal, an extra heavily constructed collector is recommended.

The "Buffalo Collector" imposes but slight back pressure on the fan. It will be less than the equivalent of the velocity in the pipe.

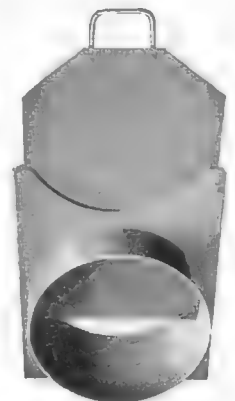
| Diameter of Inlet, Inches | Size of Refuse Outlet, Inches | Diameter of Shell, Inches | Overall Length of Collector, Inches |
|---------------------------|-------------------------------|---------------------------|-------------------------------------|
| 6                         | 6                             | 24                        | 40                                  |
| 8                         | 7                             | 32                        | 52                                  |
| 10                        | 8                             | 40                        | 64                                  |
| 12                        | 8                             | 48                        | 76                                  |
| 14                        | 8                             | 56                        | 89                                  |
| 16                        | 8                             | 64                        | 101                                 |
| 18                        | 9                             | 72                        | 114                                 |
| 20                        | 10                            | 80                        | 126                                 |
| 22                        | 11                            | 88                        | 139                                 |
| 24                        | 12                            | 96                        | 151                                 |
| 26                        | 13                            | 104                       | 163                                 |
| 28                        | 14                            | 112                       | 175                                 |
| 30                        | 15                            | 120                       | 187                                 |
| 32                        | 16                            | 128                       | 200                                 |
| 34                        | 17                            | 136                       | 212                                 |
| 36                        | 18                            | 144                       | 224                                 |

## Buffalo Slide-Pattern Blast Gates

Blast gates are necessary in every branch outlet of a blow-pipe system. They save handling useless air, thereby reducing the power consumption and increasing the efficiency of the system, since the suction is increased in the remaining branch pipes when those not in use are shut off. The blast gates should be of adequate size.

The frames of these gates are of heavy cast iron. The slides are of steel plate.

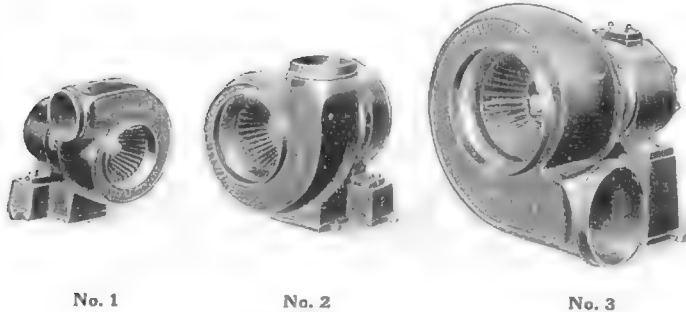
| Size  | Inside Diameter Inches | Axial Length Inches                         | Weight Pounds |
|-------|------------------------|---|---------------|
| 2     | 1 3/4                  | 3   | 1 1/2         |
| 2 1/2 | 2 1/4                  | 3 1/2                                       | 2             |
| 3     | 2 3/4                  | 4   | 2 1/2         |
| 4     | 3 3/8                  | 5 1/4                                       | 6             |
| 5     | 4 3/4                  | 5 3/4                                       | 7             |
| 6     | 5 3/4                  | 7   | 11            |
| 7     | 6 3/8                  | 7 1/2                                       | 16            |
| 8     | 7 7/8                  | 8 1/4                                       | 25            |
| 10    | 9 5/8                  | 9   | 31            |
| 12    | 11 1/2                 | 9   | 36            |
| 14    | 13 1/2                 | 8 1/4                                       | 45            |
| 16    | 15 1/4                 | 9 3/4                                       | 75            |
| 18    | 17 1/2                 | 9 1/4                                       | 80            |
| 20    | 19 1/4                 | 8 1/4                                       | 95            |
| 24    | 23 1/2                 | 9 3/4                                       | 120           |
| 26    | 25 1/2                 | Built up of angle<br>Irons and steel plate. | 150           |
| 30    | 29 1/2                 |   | 205           |
| 36    | 35 1/2                 |   | 280           |
| 42    | 41 1/2                 |   | 350           |
| 48    | 47 1/2                 |   | 460           |



NOTE:—The sizes given are the outside diameter of collar of gates over which the pipe fits.

*Buffalo*

## Buffalo Baby Conoidal Fans



The Baby Conoidal fan is of the high efficiency multiblade type with blast wheel of the same design as the Niagara Conoidal (Type N) which has met with such marked success. Housing is cast iron and can be swung around to discharge in any desired direction. This fan furnishes a large volume of air at a relatively low pressure with moderate speed. The wheel is accurately balanced, assuring a smooth-running, noiseless machine.

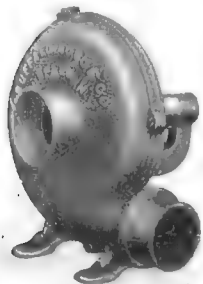
It is unexcelled for all kinds of drying and cooling purposes, for supplying fresh, cool air to offices, homes, staterooms, telephone booths, etc., and for exhausting smoke fumes and foul air from kitchens, restaurants, lavatories, etc.

Cord and plug are furnished; no expense for installing, simply attach to an electric light socket. Outfits are furnished with 110 or 220 Volt D. C. motors and 110 or 220 Volt single phase, 60 cycle, A. C. Motors. Larger sizes.

| Number of Fan | Revolutions per Minute | Air per Minute Cubic Feet | PRESSURE            |             |                   |                      |
|---------------|------------------------|---------------------------|---------------------|-------------|-------------------|----------------------|
|               |                        |                           | Static Inches Water | Horse Power | Horse Power Motor | Shipping Weight Lbs. |
| 1             | 1740                   | 75                        | 0.17                | 0.012       | 1/30              | 40                   |
| 2             | 1740                   | 160                       | 0.25                | 0.030       | 1/15              | 55                   |
| 3             | 1140                   | 260                       | 0.24                | 0.160       | 1/5               | 110                  |
|               | 1740                   | 500                       | 0.47                | 0.180       | 1/4               | 115                  |

## Buffalo Experimental Exhausters

These small cast iron exhausters of the pulley type (which may also be used as blowers) correspond with reference to capacity, very closely to the first three sizes of the steel pressure blowers, but are of somewhat lighter construction. They differ from our other fans in having shells split vertically and plain babitted bearings. They are intended especially for blowing small fires for horseshoer's work, for experimental purposes where a small quantity of air is required, and also where a blower or exhauster is required temporarily. As exhausters they are used for serving small emery and polishing wheels. The No. 0 is sufficient for serving one small fire, the No. 1/2 for two or three light fires for horseshoeing and similar work.



No. 00 Experimental Exhauster

| No. | Outside Diam. of Outlet | Height Inches | Weight Pounds | Pulley Diameter and Face Inches |
|-----|-------------------------|---------------|---------------|---------------------------------|
| 00  | 2 3/4                   | 11            | 20            | 1 1/4 x 1 1/4                   |
| 0   | 3                       | 15            | 30            | 1 5/8 x 1 5/8                   |
| 1/2 | 4 1/2                   | 20            | 45            | 1 3/4 x 2                       |

**"Buffalo"**



## Buffalo Pulley Breezo and Pulley Disk Fans

### Pulley Breezo Propeller Fan

Where a large volume of air is to be handled against little or no resistance, the Buffalo Pulley Breezo will be found ideal.

This fan has the multiblade wheel, the same as used on the electric "Breezo" described on the next page, but is arranged for pulley drive as shown. The curved blades handle an exceptionally large amount of air.

Heavy duty, dust-proof ball bearings with deep raceway in both inner and outer rings, insure efficient, trouble-free operation.

Pulley Breezos are made in five sizes from 16" to 36". Prices are exceptionally low for fans of this quality.

#### Specifications

| Size   | Normal Speed | Cu. Ft. Air per Min. | H.P. | Pulley        | Wgt. Lbs. |
|--------|--------------|----------------------|------|---------------|-----------|
| 16 in. | 1150         | 1500                 | .09  | 5 x 2 1/4 in. | 38        |
| 18 in. | 1150         | 2400                 | .12  | 5 x 2 1/4 in. | 45        |
| 24 in. | 850          | 4000                 | .21  | 5 x 2 1/4 in. | 60        |
| 30 in. | 670          | 6200                 | .34  | 7 x 3 1/2 in. | 110       |
| 36 in. | 525          | 8500                 | .44  | 7 x 3 1/2 in. | 130       |



### Type "K" Disk Fans

The Type "K" Disk Fan is made with straight steel blades, tilted at just the right angle to draw air continuously through the wheel without noise or loss in efficiency.

Heavy, well-riveted blades with sturdy angle iron frame and large bearings, make these fans rigid and suitable for high speed without vibration.

We make Type "K" fans in sizes from 42" to 12' in diameter and are able to make quick delivery on all sizes.

#### Specifications

| Size   | Normal Speed | Cu.Ft. Air Per Min. | H.P. | Pulley         | Wgt. Lbs. |
|--------|--------------|---------------------|------|----------------|-----------|
| 42 in. | 450          | 11,200              | .50  | 12 x 3 1/2 in. | 250       |
| 48 in. | 400          | 15,000              | .70  | 14 x 3 1/2 in. | 310       |
| 54 in. | 350          | 18,400              | .85  | 16 x 4 1/2 in. | 470       |
| 60 in. | 320          | 23,400              | 1.10 | 18 x 4 1/2 in. | 530       |
| 72 in. | 265          | 33,500              | 1.55 | 20 x 5 1/2 in. | 850       |
| 84 in. | 225          | 45,000              | 2.10 | 24 x 5 1/2 in. | 1500      |

Larger Sizes on Application.



*Buffalo*

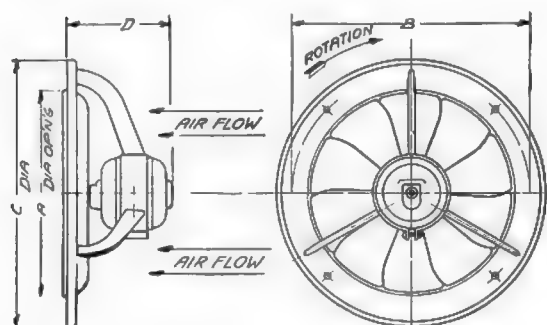
# Buffalo Breezo Electric Ventilating Fans

The wide variety of its applications makes this fan a popular seller.

In stores, clubs, smoking rooms, creameries, dining rooms, kitchens, theatres, garages, laboratories, billiard parlors, cleaning and pressing shops, printing and typesetting plants, bakeries, laundries, washrooms and toilets and in many other places the Buffalo Breezo is used to remove smoke, odors, steam, fumes or stale air.

## 10 POINTS OF SUPERIORITY

- 1 20% MORE CAPACITY than other fans of the same diameter, speed and power consumption.
- 2 STREAM LINE design and construction of the pressed steel ring permits the air to enter the wheel without frictional loss or eddy currents.
- 3 BEARINGS are of extra large dimensions, bronze bushed (the shafts are nickel steel) while the wheel is placed close to the motor bearing, giving maximum overhang with resulting increased life of the bearing.
- 4 LUBRICATION of bearings is such that each Fan will run 2500 hours without re-oiling.
- 5 BAND and RING are locked and spot-welded to the arms which are very strong and of graceful design.
- 6 HUBS are of machined steel locked securely to the wheel.
- 7 NO BOLTS are used in the assembly of the ring and arms, nothing to work loose.
- 8 PRESSED cold-rolled steel plate construction, die formed to accurate dimensions, perfect uniformity and balance.
- 9 WEIGHT far less than other fans made of cast iron, even lighter than aluminum and far stronger.
- 10 MOTOR is of totally enclosed type to keep out dirt and water. Large enough to carry the load continuously without depending on any artificial ventilation.



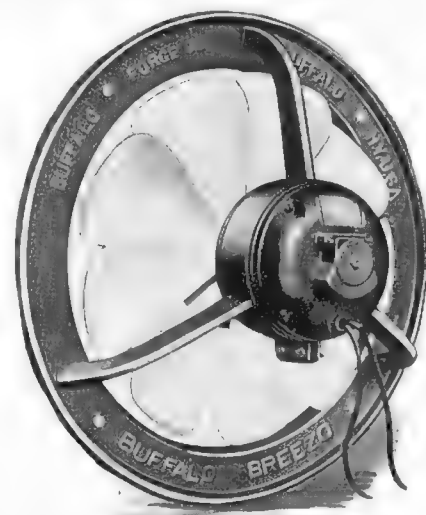
| Size | A      | B      | C      | D      |
|------|--------|--------|--------|--------|
| 12   | 12 1/2 | 14 1/4 | 15 1/2 | 6 1/2  |
| 18   | 18 3/4 | 21 1/2 | 24     | 9 1/4  |
| 24   | 25     | 28 1/2 | 32     | 14 1/4 |
| 30   | 31     | 35 1/2 | 40     | 18 3/4 |
| 36   | 37     | 42     | 47     | 18 3/4 |

Specifications

| Size   | Speed R.P.M. | Cap. Cu Ft. | Motor Size | Net Weight | Shipping |
|--------|--------------|-------------|------------|------------|----------|
| 12 in. | 750          | 600         | 1/70 h.p.  | 18 lbs.    | 25 lbs.  |
| 12 in. | 1150         | 1000        | 1/50 h.p.  | 18 lbs.    | 25 lbs.  |
| 16 in. | 850          | 1100        | 1/20 h.p.  | 36 lbs.    | 50 lbs.  |
| 16 in. | 1150         | 1500        | 1/10 h.p.  | 36 lbs.    | 50 lbs.  |
| 18 in. | 850          | 1800        | 1/10 h.p.  | 44 lbs.    | 60 lbs.  |

1150 R.P.M. Motor on 12" is not reversible.

For direct current 110 and 220 volts, also 60 cycle and 25 cycle alternating current, either single or poly phase with the exception of 36" which can be furnished for 110 and 220 volts direct current and for 220 or 440 volt, 25 or 60 cycle 3 phase alternating current.



Specifications

| Size   | Speed R.P.M. | Cap. Cu Ft. | Motor Size | Net Weight | Shipping |
|--------|--------------|-------------|------------|------------|----------|
| 18 in. | 1150         | 2400        | 1/6 h.p.   | 44 lbs.    | 60 lbs.  |
| 24 in. | 670          | 3200        | 1/4 h.p.   | 85 lbs.    | 115 lbs. |
| 24 in. | 850          | 4000        | 1/3 h.p.   | 85 lbs.    | 115 lbs. |
| 30 in. | 670          | 6200        | 1/2 h.p.   | 165 lbs.   | 220 lbs. |
| 36 in. | 575          | 10000       | 3/4 h.p.   | 220 lbs.   | 275 lbs. |

1150 R.P.M. Motor on 12" is not reversible.

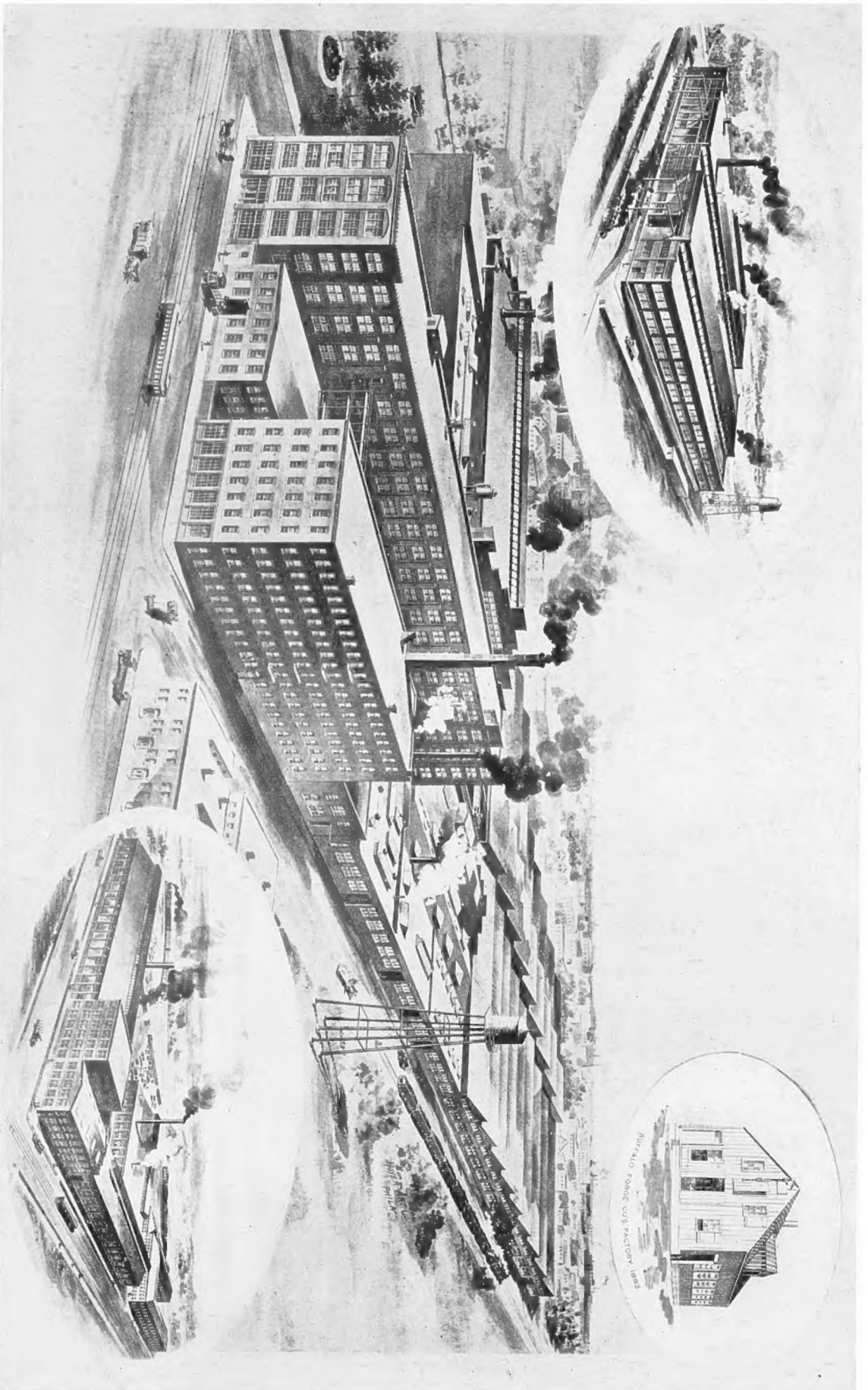
Disk or Propeller Fans are unlike the centrifugal fan with reference to general performance. They are not generally used for handling air through long runs of piping, or against any appreciable resistance. For exhausting from a room, or handling a large volume of air against little resistance, they are more efficient than a centrifugal fan used for the same purpose.

For use in connection with BUFFALO "BREEZO" Fans we can furnish automatic louver dampers, which are illustrated in a folder sent on request. These automatically open up when the fan is started, and close tightly when the fan is stopped.

*Buffalo*

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